

HSE Management System Manual

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Preface

This HSE Management System manual and the procedures contained herein will be reviewed as needed, but at the minimum, on a biennial basis for any and all necessary updates or revisions that may be required by a designated and/or contracted subject matter expert(s).

1. HSE POLICY STATEMENT

ALPHA strives for excellence in health, safety, and environmental (HSE) performance which is a core value of our company business. We are committed to the pursuit of an incident free and healthy place of work, and a clean environment and consider these behaviors vital to the success of our business.

We will seek continual improvement in our performance through the implementation of an effective HSE management system.

ALPHA embraces and applies recognized industry HSE standards in our delivery of commissioning and certification responsibilities to our clients. Alpha establishes good working relationships with clients and other contractors to help establish project HSE expectations that benefit ALL project team members to realize a safe project safety culture and performance.

Delivering HSE Excellence is accomplished by:

- Formation of a qualified and energetic HSE organization
- Compliance with all applicable legislation, corporate and client policies
- Management actively participates to deliver HSE Excellence
- Effective employee training to build positive safety behaviors
- Empowering employees to “Stop the Job” if an unsafe act is noticed.
- Proactively identifying hazards and assessments of risks
- Implementation of programs and procedures to manage risks
- Establishing clear expectations and performance goals
- Continual improvement through review, implementation, audit, and capture learnings

Delivering HSE excellence is the responsibility of everyone and requires honest conversations along with constant support and engagement by leaders.

2. HEALTH, SAFETY & ENVIRONMENT MANAGEMENT SYSTEM

The Health, Safety, and Environment Management System (HSEMS) is a set of processes and tools that facilitate the best practice in proactive management of workplace Health, Safety, and Environmental (HSE) issues. It will lead to the proactive management of liabilities as well as the reduction in HSE issues. ALPHA’s HSEMS is developed according to International safety standards.

3. EMERGENCY RESPONSE PLAN

3.1 Purpose

ALPHA COMPLETIONS GROUP, INC. (ALPHA) is committed to ensuring the safety of their personnel and the integrity of their operations wherever they are undertaken. This Procedure is designed to identify the appropriate level of focus relating to Emergency Response Plan (ERP) to be applied where it can have most impact – that is, in ensuring that all employees and contracted personnel understand and are able to put into effect what is required of him/her in any reasonably foreseeable emergency.

The “plan” will be in writing, kept in the workplace, and available to employees for review. However, until ALPHA employs more than 10 employees, the communication of this plan may be given orally to its employees.

3.2 Scope

This procedure applies to all projects, offices, and ALPHA direct employees and contractors contained therein, and operating for, or on behalf of, ALPHA.

This procedure outlines actions to be taken in the event of an emergency situation. This includes the action to be taken in the event of incidents which involve, or may involve, danger to life, damage to property, or detrimental impact on the environment.

This document forms part of an integrated suite of company emergency response procedures, manuals, and plans, which assist in providing a comprehensive emergency response system. It will be supplemented by local emergency procedures/plans for each operation/project, which specify detailed local arrangements.

Emergency response plans must be kept current through the use of a regular review schedule.

3.3 Inputs

As legislation varies in different countries, provinces, and states and in order to maintain compliance with the different regulations, ALPHA and its associated projects will adopt, the Worker’s Compensation Act and the USA Acts and Regulations. ALPHA will comply with above mentioned North American legislations unless those regulations are in contravention of the Acts, Regulations, Statutes, or Codes in the jurisdiction or locality where the work is being performed.

3.4 Method

3.4.1 Emergency Response Responsibility

The degree of responsibility of the ALPHA Emergency Response Team (ERT) is a function of whether ALPHA or the Owner Client (Client) has primacy for the response – Category A or Category B, respectively.

- **Category A** – ALPHA assumes primacy where an emergency occurs on an ALPHA office location or project site where ALPHA has management responsibility. In these situations, ALPHA undertakes full responsibility for coordinating the response to the incident and contacting the next-of-kin of employees, ALPHA sub-contractors, plus emergency services, external authorities, and other key organizations in support of a cohesive and controlled response. The ALPHA ERT must ensure that effective communications are maintained with the Client during the response to the emergency.
- **Category B** – The Client assumes primacy and has full responsibility for responding to the emergency. The Client will be responsible for mobilizing their own ERT and notifying other contractor/vendor companies and ALPHA. The initial Client contact with ALPHA will usually be with the company representative.

In order to ensure absolute clarity between the Client and ALPHA where a Category B incident is identified, an interface procedure should be in place, prior to the commencement of the activities. Although the document should cover a wide range of topics, one of the main areas of focus should be emergency response interfacing. Both ALPHA and the Client should ensure that they have a clear understanding of each other roles and responsibilities when responding to any emergency. In particular, the interface should define the respective communication between all parties, specific responsibilities for the coordination of the response, and protocols for dealing with the media.

3.4.2 Emergency Action Plan (EAP)

General guidelines for ALPHA's Emergency Action Plan include:

- Reporting of a fire or other emergency – Call 911 from a safe location and notify company responders and/or supervisor of the incident as soon as possible
- Emergency evacuation – Plans, training, and drills are to be conducted with ALPHA employees to ensure exit routes and any assignments are understood to respond to a particular type of evacuation(s).
- Post-Evacuation – Ensure all employees and visitors are accounted for and report findings to supervisor and/or designated Incident representative

- Plan Representative(s) – A list of those designated to be contacted by employees who need more information about the plan or an explanation of their duties under the plan to include his/her name or job title.
- Employee Notification - An alarm system shall be distinctive and recognizable as a signal to evacuate the work area or perform actions designated under the emergency action plan. **Note:** For ALPHA at its current status of 10 or fewer employees in a particular workplace, direct voice communication is an acceptable procedure for sounding the alarm provided all employees can hear the alarm.
- Plan Review – The plan will be reviewed as developed; the employee is assigned initially to a job; employee's responsibilities under the plan change; and/or when the plan is changed.


3.4.3 Project Data Sheet

Each non-established/existent, off-site project is required to complete a *Project Data Sheet*, which outlines emergency contacts, project scope, key project personnel, and sub-contractor information. **Note:** This does not apply to pre-established/existent working sites, e.g. rigs, vessels, remote locations with current operations/activities, etc.

During the planning stages of a project, the expectation is that the Company Representative and/or team will undertake a thorough project risk assessment. Response to specific threats to the project, e.g., natural disasters, needs to be included on the project data sheet.

3.4.3.1 Project Data Sheet Form

Note: A blank *Project Data Sheet* is located on our website and is available for download and use.

 <h2 style="display: inline-block; margin-left: 20px;">PROJECT DATA SHEET</h2>		
<p>Note: This checklist SHALL be completed prior to sending any employees to non-established/existent off-site jobs.</p>		
Category	To be filled out by CR	Notes
Team Organization		
Company Representative		Company Representative (CR) is responsible for completing the Checklist and forwarding the list for review by the President (or designee) in advance of travel.

Communication with home office		TCR is required to ensure that communication issues are defined and delivered to President (or designee) before travel.
Phone list made and distributed.		President (or designee) required to ensure that communication issues defined.
Communication with the customer		President (or designee) required to ensure that communication issues defined.
Reporting (Frequency/Method/Data Collection)		CR is required to ensure that Reporting Protocol is defined and approved by President (or designee).
Safety		
JSAs Required (Identify each JSA and date required)		JSA requirements need to be discussed/resolved prior to departure and in field as required.
BBS Safety Observations (Required Frequency/Responsibility)		To the extent that personnel are BBS Safety Observation trained, CR shall ensure periodic safety observations are completed.
Accident reporting procedures/paperwork		President (or designee) and CR responsible for subject matter.
Safety Equipment		
PPE Required		CR responsible for communicating to Team.
First Aid Kit/AED		CR will determine if First Aid Kit and/or AED are appropriate gear for effort and arrange as required.
Lifting Rigging Equipment		Identify rigging/lifting equipment required to ensure that we use "safe" devices, if applicable.
Lockout/Tagout Equipment		Identify tagout and safety locks required to ensure that we use "safe" devices.
Any special considerations for environmental conditions (extreme heat or cold)		Refer to HSE MS Manual (e.g. Heat Stress & Medical and First Aid) on our website @ alpha-cg.com
Tool Box Talks (Required at beginning of each shift)		CR responsible at the start of each work day/shift

Availability of Medical Support		
Occupational Health Care Provider		Get name, location, and telephone # of nearest OHCP - document and provide to entire Team
Nearest Emergency Medical Support		Hospital or EMT/Doctor for at-sea operations - document and provide to entire Team
Local Site Safety Requirements		e.g., Special training required for embarkation on ships
Use of ALPHA International gear		If the job requires use of any equipment other than that provided by ALPHA, describe steps taken to ensure the safe operation and safety of that equipment.
Customer/Host Standards		Consider whether the customer or host may impose less stringent safety requirements than ALPHA and how to deal with that.
Incident Reporting/Management		CR responsible for reporting to President (or designee) in a timely manner
Training Requirements		
Identify any training requirements imposed by the host activity for work on their site		President (or designee) & CR responsibility to inquire of customer and/or point of entry, requirements prior to departure & train as required.
Identify any specific training required for the safe and efficient execution of the job		President (or designee) and CR responsibility, do it prior to departure and train as required.
Timekeeping		
Off-Site Company Representative provides daily charge codes		Establish prior to departure - President (or designee) provides charge codes for all anticipated tasks and call from field if unanticipated task is required for President (or designee) to provide.

Off-Site Company Representative responsibility to clarify chargeable vs. non-chargeable efforts		As required by ALPHA Policy, enter time for hours worked ONLY and per any Contract requirements (e.g., is OT allowed/Contract?). Chargeable vs. non-agreement with President (or designee) required prior to departure.
Identify who may authorize overtime and documentation of such authorization		Know contract terms regarding use of overtime prior to mobilizing – Company Representative notifies management of any overtime required for off-site efforts and confirms contract applicability and budget.
Identify timekeeping requirements and method		Time entry is REQUIRED daily - If no internet, follow ALPHA time recordkeeping policy.
Travel Policy		
Travel Arrangements Must Be Made through Corporate		Comply with established ALPHA travel policy.
How to deal with questions/concern concerning travel policy		President (or designee) can assist with questions.
Expense reports and Cash advance details addressed and executed early.		President (or designee) and CR responsible for ensuring completion.
Identification requirements understood and distributed early.		Type of ID (passport, TWIC, CAC, driver's license, etc.) known and valid. Details on file with President (or designee) in office. Expiration dates checked and beyond work period.
Customs requirements and statements understood.		President (or designee) and CR can assist.
Appropriate pre-briefs and post briefs planned and conducted.		President (or designee) and CR can assist.
Passports and Visas		Foreign Travel requires special considerations (e.g., Passport & Visa; medical shot card; locations of US embassy; courier cards; emergency

		contact; etc.)
Purchasing		
Shipping method, timeframes, and customs impacts understood and planned for.		President (or designee) and CR responsibility to do it prior to departure.
In-situ material ordering and material delivery considered – if something unexpected needed.		President (or designee) and CR responsibility to do it prior to departure.
Purchases of Materials to support the job must be approved beforehand by the Company Representative		President (or designee) to establish limits prior to departure and advise CR.
Load-out		
Identify all equipment/material /spares/tools required at the job-site and designate person responsible for ensuring that materials are loaded out for job		President (or designee) and CR responsible.
List all HAZMATS for shipment		President (or designee) and CR responsible.
Transportation documents. Customs forms, ITAR requirements, Air transportation restrictions? Return shipment papers, DD214, labels? Country shipping agents requirements? Work location survey requirements?		President (or designee) and Company Representative(s) responsible, this subject requires lots of management involvement

Miscellaneous		
First Aid (offshore)		Vessel must have certified first aid (EMT-type) person
PPE (offshore)		Gumby suits (not all ships supply to riders)
Allergies (offshore)		President (or designee) and Company Representative(s) should have list of known allergies of personnel and any necessary Rx / medicine available for use if needed
Security Issues		Pass & ID Requirements: TWIC, I-9, or message requirements
HAZMAT Disposal		Identify any HAZMAT disposal requirements and describe intended method of disposal.
Excess Material		Identify any excess material likely to remain at job completion and provide direction for its disposal.
APPROVED BY:		
Company Representative Name:		
Company Representative Signature:		Date:
President (or designee) Name:		
President (or designee) Signature:		Date:

3.4.3 General Organization

For the purposes of responding to any emergency, the ALPHA organization is based out of Houston, Texas. The base location has trained personnel, who can provide emergency response (ER) support to its employees on different facilities.

3.4.4 Detailed Organization

There are three (3) distinct components that comprise ALPHA’s ER organization:

- Level 1 – Operational Response Team
- Level 2 – Emergency Response Team
- Level 3 – Crisis Management Team

Note: A current *ALPHA ER Organizational Chart* is maintained and located on our website and is available for reference and use.

3.4.4.1 Level 1 – Operational Response Team

This group manages the operational front-line response to an incident including immediate first-aid, fire-fighting, musters, evacuation, rescue etc. Each individual site/project/location will have a separate procedure governing the actions to be taken locally in the event of an emergency. Actions that must be considered in the development of the local plan must include, but are not limited to:

- Location of emergency equipment
- Operational instructions for emergency equipment

There are two key roles in the Operational Response Team:

1. Site Manager – (ALPHA Nominated Command and Control Representative at Site)

Where ALPHA has primacy, i.e. Category A, it is the responsibility of the Site Manager to determine the level of support required to mitigate the impact on the operations. This determination must take into account the possibility of the incident escalating.

For activities where ALPHA has the principal responsibility for emergency management, this role would typically be undertaken by the most senior person on site. The Site Manager must ensure that on-scene/local operational response is carried-out in a safe and effective manner.

Where ALPHA does not have primacy, i.e. Category B responsibility, arrangements must be made, through effective interfacing of emergency procedures with the Client, to ensure that ALPHA is notified of any situation with the potential to adversely affect ALPHA and their sub-contractors personnel.

2. Location Focal Point

Each site/project/location will nominate an individual to act as the Location Focal Point. Their main function is to support the Operational Response Team using local knowledge and subsequent liaison with the ERT. This individual will act as the sole point of contact between the incident location/Operational Response Team and the Emergency Response Team. This approach recognizes the need to have a point of contact where the operations include limited number of personnel involved and/or working in isolation.

3.4.4.2 Level 2 – Emergency Response Team – General

This group coordinates the tactical response and is responsible for the coordination of the response, liaison with the emergency support services, casualty and evacuee's reception and facilities, responding to queries from relatives, and media. In situations where ALPHA has Category B responsibility, the Client will undertake the leadership in the areas listed above, with ALPHA taking the lead with respect to their employees and direct subcontractors.

This group will be under the leadership of the Emergency Coordinator.

Local Emergency Services / Agencies:

Information on local emergency services/agencies is detailed in the Project Data Sheet, when required for use.

Liaison with Authorities:

Given the diverse range of projects that ALPHA undertakes, direction regarding liaison with the local authorities, including municipal, provincial, and federal organizations, will be detailed in each Project Data Sheet, when required for use.

Copies of each required/completed Project Data Sheet are retained in the emergency response room.

Roles Overview:

In addition to the Emergency Coordinator (EC), the team consists of trained personnel who will fulfill the following roles:

- Human Resources Coordinator
- Client Representative
- Sub-Contractor Liaison
- Recorder/Administrator

The principle duties of this team are:

- Establish communication links with the location affected by the emergency, liaising with the Client where required
- To assess the severity of the incident (Section 4.3 Investigating the Incident: Table 1 through Table 3), its escalation potential, and the organization of additional support
- Liaison with external authorities

- Identify the support that may be required for the Next-of-Kin and Relatives

At all times, members of this team should be aware of the need to alert other members of their ER discipline to be available to take over their duties in the event of a prolonged response to the emergency. This should also be considered if the workload becomes untenable. The EC ultimately makes the decision to mobilize additional resources.

The need to mobilize the complete ER organization depends on the actual- or potential- seriousness of the incident. In many situations, it is far better to mobilize the complete team as a precaution. With this approach, the team has a greater opportunity to provide an effective response as early as possible. It also enables the EC to arrange for appropriate substitutes to be mobilized in the absence of any of the disciplines without having a detrimental effect on the quality of the response.

3.4.4.3 Level 2 – Emergency Response Team – Detailed

EC is on-call for emergency response duties. He/she will have a managerial background with a thorough understanding of both ALPHA and a Client’s typical organization.

Key responsibilities are to:

- Take overall command of the ERT
- Prioritize response activities
- Update senior management
- Review the contents of any press statements before their issue; ensure alignment with Client
- Regularly hold ‘time-outs’ to ensure the ERT are kept up-to-date
- Ensure that the ERT undertake a high level of support to the incident location
- Monitor individuals’ performance for stress

Human Resources

- Responsible for the reconciliation and logistics of all ALPHA and sub-contractor employees
- Obtain and distribute personnel-on-site (POS) and next-of-kin (NOK) lists
- Check/confirm logistics and movement of all personnel
- Clarify the process of notifications of those injured, missing, or fatalities

Client Representative

- This position is normally filled by the relevant company representative specific to the project/site
- This individual maintains contact with the Client, mobilising to the Client's premises, if practical
 - When mobilised to the Client's premises, he/she will act as the sole point of contact between the Client and the ERT

Sub-Contractor Liaison

- The sub-contractor liaison role will undertake direct communication with ALPHA's subcontractors ensuring that they are kept up-to-date with the most accurate and current information

Media-Response/Communications

- A member(s) of senior management will be trained to act as ALPHA company spokespersons in dealing with the media and the press (Note: ALL OTHER PERSONNEL ARE NOT TO SPEAK TO THE MEDIA)
- Where ALPHA takes primacy, ALPHA group media communications team may need to be mobilized in order to handle and support the emergency situation through production of press statements, to include interfacing and/or supporting the Client's media team
- Where ALPHA does not have primacy, Clients manage media queries and production of press statements

Recorder/Administrator

- The Recorder/Administrator will provide administrative support to the ER Team and overall general assistance; including ensuring that fax's, etc. are properly logged and that the wallboards are kept up-to-date

3.4.4.4 Level 3 – Crisis Management Team

On being contacted by the EC, the most senior member of ALPHA management will initially assess the incident for its potential impact on the Company's reputation, operations, employees, and overall liabilities. Following this assessment, he/she will, if required, identify the most appropriate senior manager(s) who will consider the long term strategic implications for the operation(s). Typically, he/she may require mobilizing other senior personnel covering the following areas of expertise:

Personnel; Health, Safety, and Environment; Legal; Finance; Operations; Communications; etc.

3.4.5 Response to Specific Emergencies

3.4.5.1 Natural Disasters

Examples of natural disasters that ALPHA operations may encounter are:

- Earthquakes
- Wild Land Fires
- High Winds
- Lightning
- Tornadoes
- Extreme Temperatures

In the event of a natural disaster, the Operational Response Team will activate as per standard protocol supported by the ERT. If either the Operational Response or the ERT location is directly affected by the natural disaster (i.e. rendered non-functional), a separate crisis centre would be activated. Provisions for such facilities are contained in the respective business continuity plans.

In the aftermath of a natural disaster, ALPHA's main priorities are to:

- Ensure that all uninjured personnel are moved to a 'safe area' until a decision is made for their longer term well-being
- Provide immediate medical support for the injured
- Attempt to locate and recover, if safe to do so, any casualties that have failed to report to any muster
- Arrange temporary accommodation for the survivors
- Enable all personnel to contact their families
- Ensure that the families of those involved are included in any demobilization operations

3.4.5.2 Medical

Wherever the incident has occurred, arrangements will be made with local medical services and agencies to support the Project/Site. These are detailed on the Project Data Sheet.

3.4.5.2.1 Personal Details

Each operating location must make arrangements for the following personnel information to be available and held in a secure place known to all the emergency team members:

- Overseas assignees personal/medical details
- Names and addresses of Next-of-Kin and/or the Emergency Contact
- Names and 24 hour contact numbers for each overseas location/project

The above information must be updated and amended accordingly on a regular basis.

3.4.6 Post-Incident Management

3.4.6.1 Debriefing

For crisis and major emergencies that have occurred, prior to resumption of normal operations, the Duty Emergency Coordinator will conduct and document a debriefing with selected emergency response participants.

The purpose of the debriefing will be to review the efficiency of the planned responses, consider the effects of post-traumatic stress on involved personnel, and to verify that established incident reporting and investigation procedures have been followed.

3.4.6.2 Recovery

Overall management of the recovery will be the responsibility of the Duty Emergency Coordinator who may form a support team to carry out the work.

In doing so, there are a number of elements to consider:

- Has the incident site been secured so that no further incidents can occur?
- Have those people (ALPHA employees and contractors) most closely involved in the incident been debriefed and allowed the opportunity to describe what happened, what actions they took, and suggestions they may have?
- Have representatives of the local community been contacted, their concerns expressed, and answered?
- Have the lessons learned from the incident been forwarded for wider distribution?
- Are the various interested parties, e.g. corporate headquarters, partners, authorities, insurers/loss adjusters, legal, etc. being kept informed?

- Is a program of repair or reconstruction being developed?
- Is a program under development to ensure recommendations from the Incident Report are carried out?

4. INCIDENT REPORTING AND INVESTIGATION

4.1 Purpose

This policy outlines ALPHA's incident investigation procedures, immediate response thorough investigation using Root Cause analysis methods and follow-up to ensure corrective action(s) all combine to prevent re-occurrence of accidents or incidences that cost unnecessary human suffering, loss of productivity, and equipment or environmental damage.

4.2 Responsibilities

It is the responsibility of each employee to report to his or her immediate supervisor any incident, no matter how small or insignificant it may seem at the time. The supervisor will determine what, if any, action should be taken.

The supervisor has the responsibility to investigate any report or complaint he or she may receive, either directly or indirectly. The investigation may be as simple as questioning the parties involved, or as complex as recreating the accident/incident scene and videotaping it, along with formal interviews and statements from all parties involved.

Management has the responsibility to assist the Company Representative(s) in investigating the incident. If an injury occurs requiring medical attention, the President (or designee) will meet (if at all possible) the injured employee at the nearest approved medical facility. After obtaining all necessary information, the Company Representative (or designee) will assume control of the injured employee and stay with them until they are released by the attending physician.

ALPHA personnel shall be trained in incident response, incident investigation techniques, and report writing based on their roles and responsibilities. After receiving initial training, company representatives, managers, leads, and supervisors will receive refresher training annually. Employees will receive refresher training every three (3) years.

Note: Required incidents must be verbally reported to applicable regulatory agency/agencies within eight (8) hours of their discovery. Incidents must also be reported to the client as soon as possible or in a timely manner (usually within 24 hours of an incident).

4.3 Investigating the Incident

Accident investigation is an important means used to prevent accidents and save the company many unnecessary expenses. Successful accident prevention requires a minimum of four fundamental activities:

- 1) A study of all working areas to detect and eliminate and control the physical or environmental hazards that contributes to accidents.
- 2) A study of all operating methods and practices.
- 3) Education, instruction, training, and discipline to minimize the human factors that contributes to accidents.
- 4) A thorough investigation of all accidents and incidents.

Accident prevention is the key element to ALPHA safety program. Although prevention is a must, when accidents do occur, the supervisor must be prepared to utilize the information at hand to learn from the accident to help stop similar occurrences.

All accidents *must* be investigated regardless of severity of injury or amount of property damage. The extent of the investigation depends on the potential outcome of the accident. An accident involving only first aid or minor property damage is not investigated to the same degree as an accident resulting in death or extensive property damage. Investigations must be fact-finding and not fault-finding; otherwise, they can do more harm than good. This is not to say that responsibility should not be fixed where personal failure has caused injury.

Note: Refer to Table 1 through Table 3 for specific information related to the classification of the investigation, the classification of the incident, and selection of the incident investigation team.

The investigation should be concerned only with facts. There are a variety of techniques available to the project supervisor. Depending on the nature of the accident, the investigation should be made by the supervisor who is most familiar with the process involved and the worker(s) directly involved in the accident. The supervisor at the scene knows more about the accident and the procedures being used at the time of the accident.

Supplies, i.e., writing equipment (pens and paper), measurement equipment (tape measures and rulers), cameras, small tools, PPE, marking devices (flags and equipment manuals), etc., necessary to complete the investigation will be made available for the investigator/team.

Supervisors should make an immediate report of every injury; especially those involving medical treatment (see Section 4.9). The supervisor should put into effect whatever measures can be adapted to prevent similar incidents in the future.

Table 1. Severity Matrix Categories (Actual or Potential)		
Major Incident	Serious Incident	Minor Incident

<ul style="list-style-type: none"> - Any incident involving a fatality - Any incident involving major injuries (e.g., amputations, serious eye and head injuries, injuries requiring hospitalization, etc.) - Extensive property damage in excess of \$25,000 USD - Explosions - Fires requiring outside assistance - Radiation releases and chemical spills, or releases (environmental incidents) exceeding the reportable quantities or 55 gallons (208 liters) - Major environmental impacts 	<ul style="list-style-type: none"> - Recordable injury - Personal injuries involving medical assistance beyond first aid - Property or equipment damage in the \$5,000 to \$25,000 USD range - Fires handled by local employees - Spills of more than 55 gallons of non-toxic materials, or reportable quantities of hazardous materials with possible offsite contamination and acute health risks 	<ul style="list-style-type: none"> - First aid injuries - Minor property damage (e.g., dents, broken glass, broken minor parts to equipment, etc.) up to \$5,000 USD - Onsite spills of less than 55 gallons of non-toxic materials with no possible offsite contamination
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Table 2. Investigation Level		
Level 1	Level 2	Level 3
<ul style="list-style-type: none"> - Management - Affected group or department representative - Area supervisor - HSE - Others as deemed necessary 	<ul style="list-style-type: none"> - Affected group or department representative - Area supervisor - HSE - Others as deemed necessary 	<ul style="list-style-type: none"> - Area supervisor - Others as deemed necessary <p>Note: The investigation must be completed before the end of the shift.</p>

Major Incident	Level 1	Level 1	Level 1
Serious Incident	Level 2	Level 2	Level 1
Minor Incident	Level 3	Level 3	Level 2
Table 3. Investigation Determination Guide	Low Frequency	Moderate Frequency	High Frequency
	Incident has occurred within Industry	Incident occurs on a regular basis within ALPHA	Incident occurs several times per year at an ALPHA or Owner Client facility

4.4 Incident Report Writing

The primary purpose of an accident report is to obtain valuable information. A primary tool the supervisor must use in an accident investigation is the Accident Investigation Report.

The collection of injury data must begin immediately after an accident has occurred. Preventative measures must be based on complete and unbiased knowledge of the causes of accidents. For this to happen, opinions must be left out. Remember that the primary purpose of an accident investigation is to obtain information and *not* to fix blame.

As stated earlier, each investigation should be conducted as soon as possible. A delay of only a few hours may permit important evidence to be destroyed or removed, either intentionally or unintentionally. The chief value of an investigation lies in uncovering CAUSE.

The accident investigation and report is not to place blame or “pass the buck”. No one should be assigned to the investigation team who has a reputation of unfairness. The purpose of an accident investigation is to identify facts about each injury and the accident that produced it and to record these facts.

A good investigation will include the entire sequence of events leading to the injury or damage.

Key questions that must be answered are:

- Name of injured
- Social security number
- Sex of employee
- Age of employee
- Date of accident
- Home address
- Occupation of employee
- Occupation at time of injury
- Length of employment
- Years of experience in occupation at time of accident
- Nature of injury
- Witnesses, including full name, social security number, complete home address, phone number, employer name if not an employee
- Time of injury
- Location of accident
- Accident description, in as complete detail as possible
- Causal Factors (what factors were involved and caused the accident)
- Corrective Action(s) needed to prevent reoccurrence

When filling out the accident report, there are several items to keep in mind:

Witness statements must be in their own writing. If the writing is hard to read, you can type a copy of it, but attach the original handwritten statement to the complete report.

Always use “*employee stated ...*” when writing what the employee tells you about the accident. This tells that you are only writing what the employee tells you and not your version of what happened. For example, if you write “*employee slipped on oil on the ground*” you are saying “*I saw the employee slip on the oil*”. If you write, “*employee stated that he slipped on oil on ground*” then you are saying the employee told you he slipped on some oil.

Always use “*alleged injury*” when writing about the injury. You are not a doctor, and cannot make a diagnosis. Also, at the point in the investigation a supervisor is writing his report, there might be some doubt that the injury actually occurred or is job-related.

Some litigation cases involving injuries can take up to four years before being settled. Many times, the reports filled out at the time of the accident are all ALPHA has to protect itself from unnecessary litigation, and to refresh the memories of those involved when asked to give depositions and statements. For this reason, the reports must be as detailed as possible. *Remember, it is better to have information that is not needed than to need information that you don't have.*

At a minimum, the data collected should identify the *why?* Of an accident, as well as the *who?*, *what?*, *when?*, and *where?*. Data must show the cause, as well as indirect causes, and provide information on costs of the accident.

Supervisors should never delay filling out reports because memories get fuzzy and workers will talk to each other and stories get altered. When an accident occurs, it is up to management to (1) take care of the injured employee, (2) secure the accident site, and (3) gather information on the accident from as many sources as possible.

4.5 Casual Factors and Corrective Action

In any accident, there are many factors at work that permit the occurrence of the sequence of events leading to the injury. The idea behind the corrective action procedure is to identify all the factors for which a corrective action is possible and then select the ones deemed to be most effective and beneficial. Experience has proved that the most effective way to reduce accidents is to focus on one phase of the accident problem at a time.

Lessons learned will be documented, reviewed, and communicated. In addition, applicable changes to processes shall be placed into effect to prevent reoccurrence and/or similar events.

4.6 Case Management

The management of injuries after an accident across is just as important as accident prevention. In the event an accident occurs and after all the appropriate paper work is done, the supervisor in charge of the employee has specific duties to fulfill. For this reason,

supervisors must continually stress to the employees the importance of reporting accidents as soon as they occur.

4.7 Selection of Physician

Choosing the right doctor is an important factor to consider. First and foremost, choose a doctor familiar with industrial accidents. Many times a doctor’s actions will determine whether or not an accident is recordable or non-recordable. The doctor’s wording on a diagnosis is critical in determining an accidents’ recordability. The method of treatment, use of prescription drugs, and return visits are all important factors to consider when selecting a doctor to handle the care of an injured employee.

4.8 Accompanying Employee to Doctor

After selecting an industrial physician, the President, ALPHA supervisor, or designee must accompany the employee to the doctor’s office or select a person competent to handle this critical step in injury management. This individual must explain the situation in detail to the doctor and not allow the employee to exaggerate the details of the incident. Key phrases such as “restricted duty”, “restriction of work or motion”, or “light duty” may turn a first-aid case into a recordable injury. This individual must also explain to the treating physician the duties that the injured employee has so the doctor will know what the employee can or cannot do after treatment.

Being present during an office examination with the injured employee cannot be emphasized enough. Too often injuries become recordable because the employee gives the doctor the idea that he is seriously hurt, when in reality he has only sustained minor injuries.

4.9 First Report of Employee Injury Form

Note: A blank First Report of Employee Injury form is located on our website and is available for download and use.

FIRST REPORT OF EMPLOYEE INJURY	
ALPHA COMPLETION SERVICES, INC.	
Region:	
Area:	
Office Address:	
INJURED EMPLOYEE	
Name:	Date of Birth:

Employee ID:	Citizenship:	
Address:	Telephone:	
City:	Occupation/Job Position:	
State:	Year in Occupation:	
Zip Code:	Country:	
Was this the employee's regular occupation?		
How Long Employed by ALPHA? Years ____ Months ____ Short Service Employee?		
TIME AND PLACE OF INJURY		
Date of Injury:	Day of Week and Time:	
Supervisor:	Was Supervisor Present? Yes ____ No ____	
Offshore Location: (Block #, Job #, Client)	Onshore Location: (Client)	
Company Premises? Yes ____ No ____	City:	
State:	Country:	
INJURY DETAILS AND BODY PART AFFECTED		
Were Safety Appliance / Personal Protective Equipment available for use? Yes ____ No ____ N/A		
Was PPE being used? Yes ____ No ____ N/A		
Nature of Injury: <i>(Circle One)</i>		
Strain/sprain	Bruise/contusion	
Fracture	Foreign body	
Burn	Hyperbaric/bend	
Avulsion	Abrasion	
Puncture	Dermatitis	
Cut	Other	
Cause of Injury: <i>(Circle One)</i>		
Struck by	Struck against	Contact with chemicals
Caught on	Caught in/between/under	Other
Slip/fall	Lifting/carrying	
Overexertion	Contact with electricity	
INJURY DETAILS AND BODY PART AFFECTED CONT'D.		
Body Part Effected: <i>(Circle One)</i>	Ankle	
Head	Eyes or face	
Back	Arm	
Hand or wrist	Shoulder or chest	
Leg	Feet	
ACCIDENT DESCRIPTION		

Describe the Accident:	
Employee Statement: (How and why the injury occurred)	
Was the accident work related? Yes ___ No ___	
Was the accident OSHA recordable? Yes ___ No ___	
Did the accident occur on company property? Yes ___ No ___	
POST-ACCIDENT DETAILS	
Did employee Stop Work? Yes ___ No ___	Was evacuation necessary? Yes ___ No ___
Has employee returned to work? Yes ___ No ___	Date and hour returned to work:
At what job position? _____	Did injury cause loss of time beyond day or shift? Yes ___ No ___
Was medical attention given? If yes, by whom?	Last day worked at full duty _____ Date Job Transfer or restricted duty begins _____ Date returned to full duty _____
First Aid Treatment? (Circle One) Using non-prescription medications at non-prescription strength; Administering tetanus immunization; Cleaning, flushing or soaking wounds on the skin surface; Using wound coverings, i.e., Band-Aids, gauze pads, etc., or using Steri-Strips or butterfly bandages; Hot or cold therapy; Using finger guards; Using massage; Using any totally non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.;	Using Temporary immobilization devices while transporting accident victim (splints, slings, neck collars or backboards) Drilling a fingernail or toenail to relieve pressure or draining fluids from blisters; Using eye patches; Using simple irrigation or a cotton swab to remove foreign bodies not embedded in or adhered to the eye; Using irrigation, tweezers, cotton swab or other simple means to remove splinters or foreign material from areas other than the eye; Drinking fluids to relieve heat stress.
Was employee sent to a doctor?	If yes, name and address of MD:
Was employee hospitalized?	If yes, address of hospital:
Did the incident result in a fatality?	If yes, date of death:
WITNESS INFORMATION	
Witness #1:	Witness #1:
Injured employee signature: "I have read this report, which is true and correct."	Date:
Supervisor signature: "I have read this report, which is true and correct."	Date:

5. COLLECTION OF ACCIDENT STATISTICS

5.1 Purpose

The purpose of this Procedure is to enable ALPHA to adequately maintain fully transparent measures to determine lessons learned from accidents/illnesses and the resulting impact they have on individual projects and the overall HSE performance of the company. In addition, ALPHA strives to remain compliant with the regulatory requirement of keeping records of any fatalities, injuries, and/or illnesses that are work-related; a new case; and/or meets one or more of the general recording criteria determined by OSHA.

The collation of such statistics fully assists ALPHA in developing effective HSE Management action plans to achieve the company's overall goal of continuous HSE improvement measured against achievable targets, accompanied with an associated reduction in accident statistics.

5.2 References

OSHA 29 CFR §1904 - Recording and Reporting Occupational Injuries and Illness

5.3 Definitions

Fatality – A classification of death resulting from an occupational accident or occupational illness, regardless of the time intervening between injury/illness and death.

First Aid Case – Any one time treatment and subsequent observation of minor scratches, cuts, burns, splinters, and similar injuries that do not ordinarily require medical attention. Such one-time treatment and follow up visits for observations will be considered first aid even if provided by a physician.

Frequency Rate – A measure of the number of lost time accidents in relation to the total number of man-hours worked.

Lost Time Accident/Illness (LTA) – Any injury /illness occurring during employment hours resulting in at least three days absence from work. Note: Absence does not include the day of the injury or the day of onset of illness or any days that the injured/sick person would not have normally worked i.e. weekend or national holiday.

Lost Work Day – The number of workdays (consecutive or not) beyond the day of the injury or onset of the illness the injured/sick person was away from work or limited to restricted work activity because of an occupational injury or illness.

Medical Treatment – Any treatment (other than first aid) administered by a physician or by registered professional medical personnel.

Occupational Accident – An unplanned and unexpected occurrence that upsets planned sequences of work, resulting in injury to personnel.

Occupational Illness – Any abnormal condition or disorder other than one resulting from an occupational injury caused by exposure to factors associated with the environment. It includes acute and chronic illnesses or disease that may be caused by inhalation, absorption, ingestion or direct contact.

Severity Rate – A measure of the number of work days lost due to lost time accidents indicating the severity of the lost time accidents(s).

5.4 Responsibilities

The President (or designee) shall:

- Calculate the required accident/illness frequency statistical data
- Provide this data to ALPHA management
- Identify Site accident trends and introduce appropriate action to achieve a continual reduction in accidents/illnesses
- Complete and sign all OSHA required reports, i.e. OSHA 300A
- Retain for five (5) years following the end of the calendar year that these records cover, the OSHA 300 Log; privacy case list (if one exists); annual summary; and OSHA 301 Incident Report forms

The Company Representative(s) shall:

- Ensure immediate notification to the President (or designee) of any accident, incident, etc. in his/her area(s) of control
- Enter on an OSHA 300 Log and 301 Incident Report each recordable injury or illness within seven (7) calendar days of receiving information that a recordable injury or illness has occurred
- Post the OSHA 300A Summary from February 1 to April 30 for employee viewing

ALPHA employees shall:

- Report to their immediate supervisor any accident/incident that he/she has been involved in or have witnessed

5.5 Process

5.5.1 Reporting

The following HSE statistics will be calculated on a monthly basis:

- Current monthly man-hours worked complete with a running total for the year

- Number of lost time accidents recorded
- Number of lost workdays recorded
- Number of first aid cases treated
- Number of medical treatment cases

5.5.2 Calculation Formulas

5.5.2.1 Frequency Rate

Number of LTAs ÷ Man-Hours Worked × 200,000

5.5.2.2 Severity Rate

Number of Lost Work Days ÷ Man-Hours Worked × 200,000

6. MEDICAL AND FIRST AID

6.1 Purpose

The purpose of this Procedure is to establish the minimum requirements for providing prompt medical attention in the event of an injury and occupational medical services for routine evaluation and care.

6.2 References

OSHA 29 CFR §1910.151 – Medical Services and First Aid

6.3 Responsibilities

The President (or designee) is responsible for developing a list of approved medical providers and facilities that will be utilized to treat ALPHA employees.

The President (or designee) and Company Representative(s) will review the Owner Client Emergency Response Plan(s).

The Company Representative(s) is/are responsible for ensuring the emergency numbers are correct and posted.

ALPHA employees shall be responsible for attending the site specific orientation and becoming familiar with the Owner Client Emergency Response Plan(s).

6.4 Process

6.4.1 General

Provisions shall be made before commencement of the project for prompt medical attention in case of serious injury.

All personnel will be trained in the Owner Client Emergency Response Plan and will tour the medical facility as part of their initial site orientation.

Proper equipment for prompt transportation of the injured person to a physician or hospital or a communication system for contacting necessary ambulatory service shall be provided.

The telephone numbers of the physicians, hospitals, or ambulances shall be conspicuously posted at all work locations.

In the absence of an infirmary, clinic, hospital, or physician that is reasonably accessible in terms of time and distance to the worksite and is available for the treatment of injured employees, a person(s) who has/have a valid certificate(s) in first aid shall be available at the worksite to render first aid

All personnel trained in First Aid, CPR and/or AED will be issued cards compliant with current standards, i.e. American Red Cross, American Heart Association, etc.

6.4.2 First Aid Instructions

In all cases requiring emergency medical treatment, immediately call or have a co-worker call for emergency medical assistance. In the absence of an on-site clinic/infirmary, adequate, appropriate stocked first aid kits will be made readily available for use.

Note: First aid kits will be inspected on a monthly basis to ensure currency and adequate amount of appropriate supplies. In addition, first aid kits shall consist of appropriate items, which will be adequate for the environment in which they are used, i.e. for construction operations; items shall be stored in a weather proof container with individual sealed packages of each type of item.

6.4.2.1 Wounds

Minor - Cuts, Lacerations, Abrasions, Punctures

- Wash the wound using soap and water and rinse well
- Cover the wound using a clean dressing

Major - Large cuts, Lacerations, Abrasions, Deep Punctures with severe bleeding

- Apply direct pressure on the wound with a bandage or clean cloth
- Maintain pressure on the wound until medical help arrives

6.4.2.1 Burns

Thermal (Heat)

- Rinse the burned area with water, do not scrub the affected area, and immerse the area in cool water, not ice water
- Blot the area dry and loosely cover it with sterile gauze or a clean cloth

Chemical

- Consult the MSDS for proper treatment procedures and have the MSDS available for emergency personnel
- Flush the affected area with cool water for 15 to 20 minutes, if/as directed
 - **Note:** Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities shall be provided within the work area per OSHA/ANSI requirements
- Blot the area dry and loosely cover it with sterile gauze or a clean cloth

6.4.2.2 Eye Injuries

Small Particles

- Never rub your eyes
- Use the corner of a clean cloth to draw the particle out, or flush the eye with water or an approved eye wash solution until the particle is gone

Large or Embedded Particles

- Never rub your eyes or attempt to remove the particle
- Loosely cover both eyes and seek immediate medical attention

Chemical(s)

- Consult the MSDS for proper treatment procedures and have the MSDS available for emergency personnel
- Immediately flush both eyes and continue to flush the eyes until medical assistance can be provided, if/as directed

- **Note:** Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities shall be provided within the work area per OSHA/ANSI requirements

6.4.2.3 Bodily Injuries

Neck and Back

- Never attempt to move the victim unless it is absolutely necessary
- Contact emergency personnel immediately

Broken Bones

- Do not move the victim unless it is absolutely necessary
- If the victim must be moved, "splint" the injured area using a board, cardboard, or rolled newspaper as a splint

6.4.2.4 Weather-related Illness/Injuries

Heat-related (Hyperthermia)

- Loosen all tight fitting clothing
- Give small "SIPS" of cool water, NOT ICE WATER
- Have the victim lie down in a cool place with the feet raised
- Seek medical attention

Cold-related (Hypothermia)

- Remove from exposure to cold
- Remove wet clothing and wrap in blankets
- Seek medical attention

7. NEW EMPLOYEE ORIENTATION

7.1 Purpose

The purpose of this procedure is to develop a new employee safety orientation process for ALPHA that ensures all employees are trained prior to assignment to include physical inspections of workplace areas, disciplinary process, etc.

7.2 Scope

This Procedure applies to all employees of ALPHA.

7.3 Responsibilities

The President (or designee) will:

- Develop and evaluate the new employee orientation program on an ongoing basis
- Ensure all new employees receive training in this procedure

The Company Representative(s) will:

- Ensure that new employees assigned to their groups have a thorough knowledge of the Owner Client:
 - Worksite policies and procedures
 - Potential hazards
 - Emergency response plans

7.4 Record Retention

All new employee orientation training records will be maintained for the length of employment plus 5 years.

7.5 New Employee Orientation Checklist

Note: A blank *New Employee Orientation Checklist* is located our website and is available for download and use.

New Employee Orientation Checklist

Company: _____ Employee: _____
 Trainer: _____ Hire Date: _____
 Date: _____ Position: _____

This checklist is a guideline for conducting employee safety orientations for employees new to ALPHA COMPLETIONS SERVICES, INC. (ALPHA). Once completed and signed by the Manager/Supervisor and employee, it serves as documentation that orientation has taken place.

	Date	Initials
1. Explain the company safety program, including:		
Orientation	_____	_____
On-the-job training	_____	_____
Safety meetings	_____	_____
Accident investigation	_____	_____
Disciplinary action	_____	_____
2. Use and care of personal protective equipment, (e.g., hard hat, fall		

- protection, eye protection, foot protection, etc.) _____
3. Line of communication and responsibility for immediately reporting accidents.
 - A. When to report an injury _____
 - B. How to report an injury _____
 - C. Who to report an injury to _____
 - D. Filling out accident report forms _____
 4. General overview of operation, procedures, methods and hazards as they relate to the specific job _____
 5. Pertinent safety rules of the company _____
 6. "Stop Work" Authority and responsibility is understood _____
 7. First aid supplies, equipment and training
 - A. Obtaining treatment _____
 - B. Location of Facilities _____
 - C. Location and names of First-aid trained personnel _____
 8. Emergency plan
 - A. Exit location and evacuation routes _____
 - B. Use of fire-fighting equipment (extinguishers, hose) _____
 - C. Specific procedures (medical, chemical, etc.) _____
 9. Vehicle safety (cell phone use, texting, etc.) _____
 10. Personal work habits
 - A. Serious consequences of horseplay _____
 - B. Fighting _____
 - C. Inattention _____
 - D. Smoking policy _____
 - E. Alcohol & Drug policy _____
 - F. Good housekeeping practices _____
 - G. Proper lifting techniques _____
 11. Workplace Area Inspection _____
 12. Vehicle safety (cell phone use, texting, etc.) _____

NOTE TO EMPLOYEES

Do not sign unless ALL items are covered and ALL questions are satisfactorily answered.

The signatures below document that the appropriate elements have been discussed to the satisfaction of both parties, and that the Company Representative and the employee accept responsibility for maintaining a safe and healthful work environment.

Date: _____ Employee's Signature: _____

Date: _____ ALPHA Manager's Signature: _____

8. ALCOHOL, DRUG, AND DISCIPLINE POLICY

8.1 Purpose

ALPHA has a vital interest in insuring safe, healthful and efficient working conditions for our employees. In addition, as a federal contractor, we have a duty to safely and efficiently provide the public with quality goods and services at a reasonable cost. The unlawful presence of controlled substances in the workplace conflicts with these vital interests and constitutes a violation of the public trust. For these reasons, we have established, as a condition of employment and continued employment, the following drug-free workplace policy.

8.2 General

8.2.1 Prohibition against Unlawful Presence of Controlled Substances in the Workplace

The unlawful manufacture, distribution, dispensation, possession or use of a controlled substance on our premises, in the Company's vehicles or while engaged in the Company's activities is strictly prohibited.

8.2.2 Notification of Workplace Drug Conviction

You must notify corporate Human Resources of any criminal drug statute conviction for a violation occurring within the workplace within five (5) days of such conviction. Within ten (10) days of such notification or other actual notice, ALPHA will advise the contracting agency of such conviction.

8.2.3 Compliance as a Condition of Employment

All employees are hereby advised that full compliance with the foregoing policies shall be a condition of employment at ALPHA.

8.2.4 Sanctions for Violations of Drug-Free Workplace Policy

Any employee who violates the foregoing drug-free workplace policy described above shall be subject to discipline up to and including immediate discharge.

8.2.5 Required Participation in Drug Rehabilitation

In the discretion of the Company, any employee who violates our drug-free workplace policy may be required, in connection with or in lieu of disciplinary sanctions, to participate to the Company's satisfaction in an approved drug assistance or rehabilitation program.

8.2.6 Prohibited Conduct

The following conduct regarding alcohol and drug use or abuse is prohibited under this policy:

- a) Alcohol Use – An employee may not report for duty or remain on duty while having any detectable alcohol concentration in his or her body.
- b) Alcohol Possession and On Duty Use of Alcohol – An employee may not possess or use alcohol while on duty.
- c) Use of Drugs – An employee may not report for duty or remain on duty when the employee has used a drug or drugs or has any detectable amount of such drug in his or her body, except when the use of a legal drug is pursuant to instructions of a physician who has advised the employee that the substance does not adversely affect the employee's ability to safely perform his or her duties. Employees who are taking a prescription or over-the-counter medication that may impair their ability to perform their duties safely and effectively should provide written notice from their physician or pharmacist to ALPHA Human Resources (HR) Department.
- d) Refusal to Submit to a Required Test – An employee may not refuse to submit to an alcohol or drug test as directed by ALPHA.
- e) Tampering With a Required Test – An employee may not tamper with, adulterate, alter, substitute or otherwise obstruct the testing process.
- f) Possession of Transfer or Sale – No employee may possess, transfer or sell drugs or alcohol while on duty or on ALPHA premises, nor may any employee possess any drug paraphernalia.
- g) Convictions – No employee may be convicted of any crime related to the use, possession or sale of a drug or alcohol.

8.3 Implementation

Any employee taking a prescription or over-the-counter medication should determine from his or her physician or pharmacist whether such medication may adversely affect the employee's ability to perform his or her job without accommodation. If the employee may be so impaired, the employee should report this to his or her supervisor so that appropriate accommodations may be considered.

To protect the best interest of employees and clients, ALPHA management will take whatever measures are necessary to determine if alcohol or illegal drugs are located on, or are being used on, company property. These measures will not be taken unreasonably, but only when the company believes them to be completely justified and necessary. Measures may include, not be limited to, searches of people and of personal property located on company premises. Searches may be conducted by law enforcement authorities or by management personnel. Drug and/or alcohol tests may be conducted:

- When there is reasonable suspicion of violation of this policy
- Post Incident
- Randomly where required by law or contract
- For all final candidates for employment as a condition of employment

When urine, breath, or other tests are requested or necessary, samples will be taken under the supervision of an appropriate health care or specially trained professional. The above mentioned searches and drug tests will not be conducted if an individual refuses to submit; however, refusal to submit will result in immediate removal from service and may result in the employee's termination.

Offers of employment will be contingent upon the candidate satisfactorily passing a drug screen. A candidate may not report to work without passing the pre-employment drug screen. Candidates who fail their initial drug screen will not be eligible for further employment consideration with ALPHA. A current employee who fails a drug test may be subject to disciplinary action up to and including termination.

ALPHA must certify that the candidate has satisfactorily passed the drug screening within the last 180 days. No documentation shall be furnished to ALPHA, aside from the Affidavit of Completion of Drug Screening and Background Check. Agency temporaries who are hired by ALPHA as regular employees must complete the ALPHA drug testing upon hire.

Employees experiencing problems with alcohol or other drugs are urged to voluntarily seek assistance to resolve such problems before they become serious enough to require management referral or disciplinary action. A portion of the cost of treatment may be covered by ALPHA's health care program and employees may have to assume responsibilities for the cost of a portion of the treatment. Successful treatment will be viewed positively. However, participation in a treatment program will not prevent normal

disciplinary action for a violation that may have already occurred nor will it relieve an employee of the responsibility to perform assigned duties in a safe and efficient manner.

Company Representatives are expected to identify performance or behavioral problems and to begin investigative or corrective action with guidance from your HR Department, as appropriate, based on behaviors demonstrated by employees and observed by supervisory personnel.

8.4 Disciplinary Action

ALPHA employees are expected to perform his/her job functions in a safe and legal manner. Violation(s) of this policy may result in disciplinary action. Preceding termination, the following progressive discipline actions should be performed given the nature of the offense (Note: Serious offenses, such as physical or sexual assault and/or theft will have Zero Tolerance):

8.4.1 Verbal Warning

- Employee will be given a verbal warning regarding the undesirable behavior or action.
- Employee will be given an explanation of when and how the behavior or action took place. This will include the reason as to why the behavior or action was unacceptable.
- Employee will be given an opportunity to explain the situation and their actions. This should be his/her opportunity to give their side of the story.
- Employee will be given a description the desirable and/or acceptable behavior or actions.
- Employee will be informed that further disciplinary action, up to and including termination, will follow if unacceptable behavior continues.
- Employee will be explained that the incident will not go into their file, but that it will be taken note of in order to follow up on possible further disciplinary incidents.

8.4.2. Written Warning

- Employee will be given a written warning regarding his/her undesirable behavior or action in the event that the behavior or action had either been discussed in a previous verbal warning or the behavior or action was considerably severe in nature.
- Employee will be given an explanation of when and how the undesirable behavior or action took place. This will include the reason why the behavior or action was unacceptable.
- Employee will be given an opportunity to explain the situation and his/her actions. This should be his/her opportunity to give their side of the story.

- Employee will be given a description of the desirable and/or acceptable behavior or actions.
- Employee will be provided with a copy of the written warning and another will be placed in the employee's file.
- Employee will sign the document as proof that he/she has received it.
- Employee will be explained that future disciplinary problems will be addressed with further progressive disciplinary actions up to and including termination.

8.4.3. Suspension

- Employee will be given written documentation regarding the suspension in relation to the undesirable behavior or action in the event that the behavior or action had either been discussed in a previous verbal or written warning or the behavior or action was considerably severe in nature.
- The documentation will include information on the offence and the length of the term of suspension and why the employee has been suspended.
- Employee will be given an explanation of when and how the undesirable behavior or action took place. This will include the reason why the behavior or action was unacceptable.
- Employee will be given a description of the desirable and/or acceptable behavior or actions.
- Employee will be provided a copy of the suspension and another copy will be placed in the employee's file.
- Employee will sign the document as proof that he/she has received it.
- Employee will be explained that future disciplinary problems will be addressed with further progressive disciplinary actions up to and including termination.

8.4.4. Termination

- Employee will be given written documentation regarding his/her termination and the undesirable behavior or action leading to and justifying the termination.
- Documentation should include information on the offence and previous disciplinary communications with the employee.
- Employee will be given a description of when and how the unacceptable behavior or action took place. This will include the reason why the behavior or action was unacceptable.
- Employee will be given a description of the desirable and/or acceptable behavior or actions.
- Employee will be provided with a copy of the termination notice and another copy will be placed in the employee's file.
- Employee will be escorted from the location immediately maintaining the dignity of the terminated employee by not making obvious to other employees that the employee has been terminated and for what reasons.

9. FIT FOR DUTY

9.1 Purpose

Each employee has an individual responsibility to prevent accidents. It is to the benefit of all employees and ALPHA that you report any situation or condition you believe may present a safety hazard, including any known or concealed dangers in your work area.

ALPHA encourages you to report your concern either to your immediate Company Representative or to the President (or designee). They will take immediate action to investigate the matter.

9.2 Scope

This procedure applies to all ALPHA employees.

9.3 Reference

29 CFR §1630.13 – Prohibited medical examinations and inquiries

42 USC §12112 – Discrimination

9.4 Responsibilities

Employees are responsible for ensuring they are physically and mentally fit to perform their job functions safely. Employees are responsible for notifying their supervisor if they are fatigued to the point of not being able to perform their duties safely. Employees must take responsibility for their own safety as well as not reporting to work in a condition as to endanger the safety of their fellow workers.

9.5 Process

9.5.1 Post-Offer & Pre-Placement Physicals

Fit-for-duty physicals for current and prospective ALPHA employees are intended for positions that require offshore work to be performed. These evaluations occur:

- During post-offer phase of the hiring process
- When changing/transferring into these “certain” positions
- When returning to duty following an absence due to illness or injury, as required

These assessments shall include a pre-placement medical evaluation (PME) and functional agility testing (FAT), which have been developed to mimic functional requirements of the job. Goals for each employee are dependent on the demands of his/her respective job(s) and anticipated work environment. A completed *Self-*

Certification of Fitness Form and position description, including physical requirements, shall be provided to the evaluating medical provider for reference.

Note: A blank *Self-Certification of Fitness Form* is available on our website.

9.5.2 “For Cause” Situations

For cause situations are where observed employee performance/behavior results in a question of the individual’s fitness to work. Hence, the Equal Employment Opportunity Commission (EEOC) provides the following examples of when ALPHA would have "cause" to conduct a medical examination of its employee(s):

- Following a request for a reasonable accommodation when the disability or need for an accommodation is not known or obvious
- After observing performance problems by an employee with a known medical condition, and the performance problems reasonably can be attributable to the medical condition
- After observing symptoms indicating that an employee may have a medical condition that will impair his ability to perform essential job functions or will pose a direct threat to himself or others
- After receiving “reliable information” from a third party that an employee has a medical condition that will impair his ability to perform essential functions or will pose a direct threat to himself or others
- Following an employee’s return from leave when the employer has a reasonable belief the employee’s present ability to perform the essential functions of the job will be impaired by a medical condition or that the employee will pose a direct threat due to a medical condition

In such a situation, the employee will complete an appropriate *Self-Certification of Fitness Form* and provide written medical proof of their condition (if any) and ability to perform his/her work.

9.5.3 Training

To be effective, and safe, employees need to be trained in every aspect of their job, such as: training specific to their assigned task. Examples might be welding, instrumentation, scaffold building, equipment operator qualifications, respirator fit test, etc. Training must include ALPHA’s health and safety orientation for new employees plus any additional training specific to the nature of hazards on the job; employees must complete this training before they can work unsupervised. All new employees must attend the new employee orientation within the first month of employment.

Company Representatives will identify training needs for the job classifications for which they are responsible. This includes information on procedural changes or system

modifications that impact safety; health and safety training courses, technical assistance on training needs, and resources to help fulfill training responsibilities. Safe work procedures must be in place. Examples might include, hot work permitting, confined space, LO/TO, PSM, Electrical Safety, Operator Safety, etc.

Educational resources such as fact sheets, hazard summaries, and other written materials, as well as videos or slide shows, are available.

All health and safety training must be documented. The trainer must note the participants' names and employee numbers, topics discussed, instructor(s), and date. Company Representatives are responsible for maintaining training records at the worksite. A copy of this information should be sent to the President (or designee) for inclusion in the ALPHA training files.

9.5.4 Drug Free Workplace

It is the policy of ALPHA to have a drug-free workplace. Drug and alcohol testing shall be as prescribed by DOT or host facilities. All employees are expected to report to work in a drug-free physical and mental condition that will allow them to perform their work in a safe and competent manner.

As part of our substance abuse program, new workers may be given an initial drug screening/ test. Workers who test positive for drugs or other signs of substance abuse will not be hired. Employees must report all medications they are taking. Over-the-counter medications such as allergy or cold and flu medications could also impair one's ability to perform safely and must also be reported to their supervisor. Additionally, random drug testing may be performed throughout your term of employment at ALPHA's' discretion.

Workers already employed by ALPHA who test positive for drugs may be terminated, or referred to a community substance abuse program for help, disciplinary action, or notification of authorities, at the discretion of the employer. Employee's activities and behaviors should be monitored to determine if employee should be removed from the work site.

9.5.5 Safety Equipment

Proper safety equipment is necessary for your protection. Use all safeguards, safety appliances, or devices furnished for your protection and comply with all regulations that may concern or affect your safety. Wear your gear properly - all snaps and straps fastened, cuffs not cut or rolled.

Your supervisor will advise you as to what protective equipment is required for your job.

Certain jobs require standard safety apparel and appliances for the protection of the employee. Your supervisor is aware of the requirements and will furnish you with the necessary approved protective appliances. These items shall be worn and effectively maintained as a condition of your continued employment and part of our mutual obligation to comply with the Occupational Safety and Health Act.

Safety goggles, glasses and face shields shall correspond to the degree of hazard, i.e., chemical splashes, welding flashes, impact hazard, dust, etc. Do not alter or replace an approved appliance without permission from your supervisor.

Rubber gloves and rubber aprons shall be worn when working with acids, caustics or other corrosive materials.

Specified footwear must be worn.

No jewelry shall be worn around power equipment.

Hearing protection appliances (approved muffs or plugs) shall be worn by all employees working within any area identified as having excess noise levels.

9.5.6 Protective Clothing

Proper safety equipment is necessary for your protection. Wear your gear properly - all snaps and straps fastened, cuffs not cut or rolled.

9.5.7 Modified Work (Light Duty)

It is the policy of ALPHA to provide modified work to persons who have been injured on the job or become ill because of an occupational exposure. Work provided for employees will be compatible with their work restrictions, and will not expose the employee to additional harm or injury.

Employees who are injured or become ill must provide the company with a written medical statement of release from their treating physician or other licensed provider. Upon return to work, this release must be submitted to their supervisor or other authorized company representative prior to being assigned to perform any work.

The policy of ALPHA is to not schedule persons on modified duty work status to work overtime. Persons who are permitted to return to work on a modified duty status will be scheduled to work their normal work schedule not including any overtime hours they would have normally worked unless the supervisor or other responsible management person directs otherwise.

9.5.8 Non-Occupational Illnesses and Injuries

Employees who are injured or become ill at home or during non-work hours must provide ALPHA with a written medical release without restrictions upon returning to work. Employees who have been injured severely or have had a contagious illness must provide ALPHA with written proof that they have recovered from their condition. If an injury or illness is of a serious nature the President (or designee) will be consulted before a person is permitted to return to work.

9.5.9 Return to Work Policy

In all cases employees who have sustained an on-the-job injury or illness must provide written medical proof of their condition and ability to perform their work upon their return to work.

10. SHORT SERVICE EMPLOYEE (SSE)

10.1 Purpose

The purpose of this Procedure is to establish the minimum requirements for completing ALPHA's Short Service Employees (SSE) Program. This program is intended to help ALPHA keep new employees, whether experienced or not, safe while on the job.

10.2 Definitions

Expiration Date – 90 calendar days after the employee's first day of employment.

Mentoring – A process of transferring skills and knowledge from one person to another in a work environment.

New Employee – Anyone who has never worked for ALPHA for longer than 90 days.

Short Service Employee (SSE) – An employee with less than 90 days employment with ALPHA regardless of length of service in their respective craft. The 90 days must run consecutively in order for the employee to be removed from the SSE program.

Short Service Employee (SSE) Mentor – Person with at least six (6) month's employment with company, who has demonstrated safe and efficient work habits.

Supervisor – The individual responsible for the direct supervision and oversight of an employee.

10.3 SSE Program

This procedure applies to all company facilities and worksites. It is important to ensure that newly placed employees work under the direction of experienced personnel and never alone.

SSEs should make up no more than 50% of a single crew at one time. Further, a crew of five (5) employees or less should include no more than one (1) SSE at a time.

An SSE should be under this program for at least six (6) months and until the SSE demonstrates the knowledge and skills necessary to perform his/her tasks safely.

ALPHA does not use Subcontractors; however, if this were to change, ALPHA subcontractors must manage their Short Service Employees in accordance with the requirements of this Short Service Employee program.

10.3.1 Management Responsibilities

The responsibilities of company leadership and management are to set expectations, evaluate effectiveness, and:

- Make and demonstrate a personal commitment to a strong and functional Health, Safety, and Environmental (HSE) work culture
- Establish a written, signed, and dated HSE policy that sets compliance expectations for management and employees
- Provide employees access to company policies, standards, and procedures
- Establish written HSE Orientation and SSE Programs for all employees newly assigned to any job or task
- Ensure that all employees new to a job assignment are identified to the responsible supervisor(s) and placed into the HSE Orientation and SSE Programs
- Audit, review performance, and take timely corrective actions to continually improve the effectiveness of the HSE Orientation and SSE Programs

10.3.2 Supervisor Responsibilities

The responsibilities of Supervisors in the SSE Program are:

- Know which jobs and crews are using SSEs
- Ensure SSEs are appropriately identified per this plan
- Develop and communicate Job Safety Analyses (JSAs) to affected personnel upon initial assignment and when the operation changes
- Ensure SSE Mentor possesses proper knowledge and skills in the job task assigned
- Ensure SSE Mentor is adequately training SSE(s)

- Ensure SSE is gaining the necessary knowledge and skills in the job tasks and following all safety rules and company policies

10.3.3 Mentor Responsibilities

The responsibilities of the Mentor in the SSE Program are to:

- Be an experienced and responsible person assigned by the supervisor to work with the new employee
- Be selected based on history of safe work and policy/procedural knowledge
- Be able to communicate the expectations and characteristics of work tasks and their associated hazards
- Have a patient disposition as well as the desire and willingness to devote the time necessary to succeed as a mentor
- Possess knowledge and skills in the job tasks assigned to the SSE(s)
- Be willing and able to effectively listen to the SSE(s) to determine if the SSE(s) is/are learning and retaining the knowledge being shared
- Adopt a positive safety attitude, avoid criticism, and strive to build confidence and self-esteem in the SSE(s)
- Be able to teach the SSE(s), the proper way to create a quality JSA and to follow that JSA in performing tasks
- Keep abreast of new equipment in his/her field of expertise
- Refrain from taking shortcuts and doing anything else that jeopardizes health, or safety
- Demonstrate a positive work ethic at all times
- Introduce the SSE Checklist (Appendix B) to the new employee. The checklist is a tool to:
 - Train the new employee and monitor progress
 - Review with new employee periodically over the six-month period
 - Be forwarded for supervisor and management review
 - Follow all company policies and procedures

Note: A current list of *ALPHA Approved Mentors* is located on our website and is maintained and available for reference and use.

10.3.4 Short Service Employee (SSE) Responsibilities

The responsibilities of the SSE are to:

- Be willing to watch and listen to Mentor
- Establish a positive safety attitude toward assigned job tasks
- Learn how to create and follow JSAs

- Be willing to learn how to do each task in a safe and environmentally sound manner
- Stop and report unsafe conditions immediately
- Participate in safety meetings
- Follow all safety rules and company policies

10.4 Procedure for SSE Program

10.4.1 Notification

The HR Department notifies worksite management/supervision and safety department of all newly hired or reassigned employees who require training.

10.4.2 Orientation

Management will provide a company-approved orientation. The orientation will include a *New Employee Orientation Checklist* (located on our website) that the supervisor and/or mentor reviews/completes with the newly hired or reassigned employee.

Each SSE will be provided an orientation specifically based on job position and job-related topics prior to performing job tasks.

Each SSE will be taught how to access company policies, standards, and procedures.

Satisfactory completion of the orientation must be signed and dated by the employee and supervisor.

10.4.3 Training

The supervisor will ensure that each SSE is properly trained per Federal, State, Local, Industry, Company, and Operator requirements before starting work when the employee is:

- Hired
- Appointed a new job assignment
- Exposed to new substances, processes, procedures, equipment, etc. that present a new hazard to the employee

The supervisor will ensure that each SSE is properly trained in the:

- Hazard(s) present in the workplace
- Policies, procedures, processes, and PPE utilized to control known hazards and prevent illnesses, injuries, property damage, and/or environmental incidents

- Skills necessary to conduct his/her assigned jobs safely and efficiently, while providing quality and economy

10.4.4 Identification System

It is important for supervisors, co-workers, and company representatives to recognize an SSE. Therefore, an identification system is developed for this purpose. The identification system is a means of communicating to the workforce that the SSE is in a transitional period. It will not be a designation of in-experience or used to mark an employee as having lower skills sets.

The SSE will be identified by a vest, colored hard hat, decal, or other clothing or PPE that prominently identifies the employee as an SSE. For example, if a hard hat decal is used, it should be placed on each side of the hard hat with a label under the decal indicating the date when the employee is no longer considered to be an SSE. The Supervisor and SSE Mentor will provide supervision and not allow the SSE to perform any task in which he/she has not been properly trained. The Supervisor and SSE Mentor will ensure that the SSE understands the task to be performed and its associated hazards.

Upon expiration of the SSE term and verification that the SSE exhibits a knowledge and skill level to perform the job tasks assigned, the Supervisor shall remove the SSE decals and other identifiers.

10.4.5 Documentation

The HR Department notifies management and safety department.

Upon completion of training, Supervisor signs off and forwards notification form to HR Department.

All records for the SSE Orientation and Training should be maintained at the employee's location by the Supervisor.

A current list of *ALPHA Approved Mentors* is maintained and located on our website and is available for reference and use.

11. CRANE OPERATOR – OFFSHORE

11.1 Introduction

The purpose of this document is to provide deck crews and crane operators with:

- Guidance on the minimum standards required for deck operations offshore
- Examples of good practice
- Sources of help and further advice

ALPHA has no company employees conducting crane operator work. Should ALPHA decide to use employees to perform such duties, this document will be revised to include additional aspects necessary for the safe offshore operation of cranes.

11.2 References

API RP 2D – Offshore Cranes

ASME B30.9

BS EN 13852-1:2004 – Cranes. Offshore cranes. General-purpose offshore cranes

11.3 Responsibilities

11.3.1 Banksman (Flagman)

The Banksman (Flagman) controls the initial lifting of the load, laydown of the load and lifts that are out of the line of vision of the Crane Operator. The Crane Operator is responsible while the load is in the air. The Banksman must ensure that he/she:

- Is easily identifiable from other personnel by wearing a hi-vis jacket or waistcoat, which is clearly marked to indicate that he/she is the authorized crane Banksman
- Does not touch the load – They must stand back from the load being handled in a prominent position where they have a good view of the lifting activities
- Remains in communication with the load handler and Crane Operator at all times
- Keeps the load handler in sight during the lifting operation
- Does not direct the crane in a load path over ‘live’ plant unless covered by a specific risk assessment
- Removes barrels, drums, etc. from transit carriers or containers
 - This shall be carried out using lifting equipment specifically designed for that purpose
 - Always ensure the integrity of the barrel rim
 - This equipment shall not be used when lifting barrels or drums across Installation areas
 - Secure methods of slinging shall be used for this task

11.3.2 Slinger

The Slinger must:

- Stand clear while a load is lifted clear of the deck and landed, while slack is taken up with or without a load on the hook, and must confirm to the Banksman that he is clear

- Not touch a load being landed until it is below his/her waist height and never attempt to manually stop a swinging load
- Be easily identifiable and distinct from the Banksman

11.3.3 Crane Operator

The Crane Operator operates the crane under the direction of the Banksman. Crane Operator(s) provide:

- Technical advice on the safe operation of the crane
- Judgment on the conditions for safe lifting operations from vessels
- Daily maintenance and checks on cranes

When a situation arises or a condition exists where, in the incumbent's qualified opinion, the safety of personnel, plant or equipment may be jeopardized, crane operator(s) will be expected and/or required to suspend lifting operations until such time as control measures have been introduced to minimize or eliminate the potential risks.

When lifting operations have been temporarily suspended due to inclement weather or, in the case of a supply vessel, back-loading/discharging has stopped, they shall not recommence until the Crane Operator is satisfied that conditions have improved to within the safe operating parameters recommended by the crane manufacturer or imposed by ALPHA or Owner Client.

11.4 Competence

11.4.1 Banksman (Flagman)

Before acting as a Banksman on a specific Installation, the Banksman must have all of the following:

- An approved training course certificate
- Experience of lifting operations offshore for not less than 6 months in the previous two (2) years
- Formal assessment of competence
- A formal appointment based on the recommendation of the Deck Foreman and Crane Operator after familiarization with the Installation
- Training and qualification for VHF communication with vessels

11.4.2 Slinger

The Slinger must have:

- An approved training course certificate

- Experience of lifting operations offshore for not less than 6 months in the previous two (2) years
- Worked under the supervision of competent Slings/Banksmen to gain experience

11.4.3 Crane Operator

The Crane Operator must be:

- Trained and deemed as competent by a technically qualified assessor to:
 - Offshore Stage 2 for deck operations
 - Offshore Stage 3 for boat operations
 - Refresher training will be completed every four (4) years
- Assessed every two (2) years by a qualified assessor
- Trained for VHF communication with vessels

The Crane Operator will be selected based on having appropriate offshore experience and training, which must be comprised of minimum amounts of classroom sessions and hands-on training, to include: lubricating points, adjustments, principles of crane operators, load charts, hand signals, and inspections. Training will also include use of fire extinguishers.

The Crane Operator must also pass API 2D physical requirements, which are:

- Vision of at least 20/30 Snellen in one eye and 20/50 in the other eye with or without glasses
- Depth perception to be able to distinguish between red, yellow, and green
- Hearing, with or without a hearing aid, adequate for the specific operation
- No history of disabling medical condition which may be sufficient reason for disqualification

Crane Operator qualifications must be maintained every four years and shall include vision and medical condition evaluations.

Note: These conditions/expectations do not apply to personnel who are engaged on a Crane Operator training program. Their crane operational activity will be strictly aligned to their levels of formal training and experience.

11.5 General Crane Operations

11.5.1 Control of Lifting Operations – Communications

Lack of effective communication is one of the main contributors to safety problems arising from routine and non-routine activities within the industry. Lifting operations may be controlled by hand signals or radio, or both.

The Crane Operator must only respond to hand or radio signals when given by an authorized Banksman. The Crane Operator shall only respond to signals from other persons in an emergency situation; i.e., when the 'stop' signal is given.

11.5.2 Hand Signals

It is imperative that Crane Operators and Banksmen are familiar with the system of signaling used onboard the Installation.

When hand signals are being used, maintain visual contact with the Banksman. Lifting operations must cease if visual contact is lost. These operations can only recommence when a clear line of vision is re-established.

The Crane Operator must ensure that the Banksman signaling system is clearly displayed at a strategic point within the crane operating cabin.

When the Crane Operator's ability to see hand signals from the Banksman is impaired by inclement weather conditions, darkness, etc., crane operations are to cease if the Crane Operator feels that the operation cannot be executed safely.

When 'blind' lifts are being conducted by a hand signaling method and more than one Banksman is being used to relay instructions to the Crane Operator, each Banksman shall stand in a position where he/she can be clearly seen by the next person in the chain. All signals shall be clear and precise. The Banksman at the load shall have a complete overview of the activity.

11.5.3 Radio Communication

All radio banking operations must be on a dedicated channel, which cannot be interfered with by other users. The radio communication must be confirmed before starting lifting operations.

When radio communication is being used, the Crane Operator is to reach a clear understanding with the Banksman before lifting operations begin. If there is any interruption to the communication, the Crane Operator must stop the lifting operation immediately until communication with the Banksman is re-established.

Radio communication with a vessel must be in a common language. Direct radio communication must be available between the Crane Operator, Banksman, platform deck crew, bridge, and vessel deck crew for emergency situation.

Where a vessel is concurrently loading/discharging bulk materials by hose and handling cargo by crane, separate channels will be used for lifting and bulk transfer operations to prevent interference with the control of crane operations.

All VHF users must be licensed.

All personnel involved in lifting operations will be trained in the use of the Installation's radios and radio protocols, including the channels they are allowed to use.

11.6 Deck-to-Deck Lifting

11.6.1 Preparation

Before commencing a deck-to-deck lift:

- Define the scope of work, categorize lift risk assessment and confirm that the lift is within the generic lifting plan
- Select team, nominate roles and hold toolbox talk
- Barrier off area
- Confirm that the radios work

Prior to commencing and during lifting operations, the Banksman and Crane Operator are to take stock of the prevailing weather conditions; e.g., wind speed/direction and visibility. Lifting operations will not commence if the weather or environmental conditions are liable to jeopardize the safety of the activity.

While there is a shared responsibility for the safety of each lifting operation (e.g., Crane Operator, Banksman, and Slinger), the Banksman controls the initial lifting of the load, laydown of the load, and lifts that are out of the Crane Operator's line of vision. The Crane Operator is responsible while the load is in the air within his line of vision.

Before a load is attached, the Crane Operator must be aware of the weight of the load to be lifted. The Banksman will satisfy himself that the lifting gear being used is certified (e.g., color coded), of sufficient capacity and is correctly attached and positioned to prevent uneven lifting or slippage of the load. Check for potential dropped objects and that the load is secure.

If the risk assessment requires taglines, the Banksman will ensure that they are attached.

The Banksman will ensure that the hook is over the center of the lifting point to alleviate any 'drift' in the load as it is lifted clear of the deck.

When lifting from baskets or containers, the lift will not commence until personnel are clear of the immediate area of the lift, i.e., out of the vicinity of the basket or container.

11.6.2 Handling and Movement

As the load is lifted off the deck the Crane Operator will monitor the Rated Capacity Indicator (RCI) for a possible overload situation developing.

At the commencement of the first lift, the Crane Operator must check the operation of the hoist brake.

When moving loads across the deck of the Installation, the Crane Operator and Banksman shall be aware of any other activities/obstructions within the crane radius arc and shall avoid the movement of loads over the heads of other personnel.

When carrying out blind lifts, the Crane Operator will monitor the RCI for any loss or increase in the weight of the load. This could indicate that the load has snagged on the superstructure or the adjacent equipment. Cease the lifting operation and advise the Banksman.

The Crane Operator will keep loads within the specified radius of the crane.

Where lifting activities necessitate the crane boom to operate in close proximity to conflicting structures such as drilling derricks, telecom towers, accommodation structures, etc., a toolbox talk and lifting plan shall be carried out between all concerned parties, outlining all associated risks and subsequent control measures to be taken.

Where a crane boom is operating in close proximity to conflicting structures, the Crane Operator shall ensure that a Banksman is positioned at a point where he/she has a clear overview of the load, crane boom and potential contact points.

If at any point the Crane Operator becomes concerned that the boom is too close to a conflicting structure, or that they have been instructed by the Banksman to undertake a maneuver that may result in a collision, he/she must cease operations immediately and advise the Banksman of his concerns. Crane operations must not recommence until such time that appropriate control measures have been put in place and all necessary precautions have been taken.

When the load remains static for any reason, the Crane Operator must not leave his position at the controls. Where the load is to remain static for prolonged periods, engage the hoist drum brake and the boom drum pawl (where these devices are not automatically applied) that shall prevent the lowering of the suspended load.

11.6.3 Cargo Handling – Supply Vessels

Prior to startup, ensure that all controls are in neutral position and that the main clutch (where fitted) is disengaged.

Establish radio communication with the Master of the supply vessel or, where applicable, the vessel's deck crew.

Prior to the commencement of supply boat operations, confirm that the prevailing wind and sea state conditions are within operating limits.

The Crane Operator shall ensure that the RCI is adjusted to register the appropriate sea state condition. Any alteration in sea state during cargo handling operations shall be taken into account and the RCI altered accordingly.

The Deck Foreman is to obtain the manifest listing before supply boat operations. Prior to hoisting loads off a supply vessel deck, ensure that the ship's crew has reached a position of safety well clear of the cargo handling area and have given the appropriate signal or instruction to hoist.

Prior to back-loading cargo to a supply vessel deck, ensure that the ship's deck crew is in a position of safety, well clear of the intended cargo stowage area.

When hoisting loads off a moving supply vessel deck packed with cargo, the Crane Operator shall be alert for snag-ups or loads that are still lashed to the deck, or for wrongly manifested cargo weights.

During lifting operations, particularly whilst engaged in supply vessel activities, the Crane Operator shall take all necessary actions to avoid excessive impact and avert shock loading being transmitted to the crane. The Crane Operator shall wait for the correct moment to make the lift and shall not be rushed by frantic arm waving from the vessel deck crew personnel.

Where practical, the Crane Operator shall not use maximum boom radius during supply vessel discharging and back-loading operations. The Crane Operator shall assess each individual situation taking into account the supply vessel drift movement and prevailing environmental conditions. Some boom radius shall be retained in reserve to compensate for the drift movement in the event that it is necessary to abort the operation in instances where the supply vessel is unable to hold station alongside the Installation.

If a load is immersed in the sea for any reason, be aware of the possible increase in weight from water absorption. Report the incident to the individual designated by the Offshore Installation Manager (OIM) as the Responsible Person for lifting operations so that he can check the load and/or contents for any damage sustained following its retrieval.

Whenever possible, hoist/lower loads over open water and not over the supply vessel deck.

When discharging long tubulars, baskets, or other awkward loads, ensure that taglines are attached to assist with the control and handling of the load on the Installation deck when required by the risk assessment.

The practice of ‘cherry picking’ cargo or attempting to backload into areas that are not easily accessible is to be strictly avoided.

11.6.4 Crane Operation – FPSOs and DSVs

The hazards associated with crane operations on Floating Production, Storage and Offloading facilities (FPSOs) and Diving Support Vessels (DSVs) are radically different from fixed Installation, and as such extreme caution shall be taken during crane operations. Primary considerations shall include:

- Vessel stability (pitch, roll and heave)
- Proximity to live process plant or other equipment
- Establishment of realistic operating parameters
- All individuals involved in the lifting operation shall be familiar with the crane operational characteristics and parameters. They shall also be familiar with the working environment and the combined behavioral pattern of the vessel and crane(s)
- Potential dangers while carrying out lifts out of the Crane Operator’s line of vision, i.e., blind lifts

11.6.5 Bulk Hose Handling

The Crane Operator must exercise extreme caution when transferring bulk/liquid hoses between the Installation and supply vessel. Follow the Banksman’s signal and monitor the RCI for any sudden increase in weight that may indicate that the hose has snagged on a protrusion on the Installation or supply vessel.

When engaged in deployment or re-stowage of bulk hoses, the Banksman and handlers must never stand in a position where there is potential for entanglement in a hose or being struck by a falling hose. Other personnel must be kept well clear of the area. The Banksman shall stand in a position where a clear view of the hose handling operation can be attained. (It is strongly advised that safety cages or framework are erected over hose handling stations to protect personnel involved in such operations in the event that a hose becomes detached from the crane or lifting arrangement).

11.6.6 Personnel Carrier Transfers

Personnel carrier transfers to or from offshore Installations are considered a high-risk operation and shall only be used in exceptional circumstances, i.e., emergency situation or when transfer is essential and it is not practicable to gain access by less hazardous means. Normally the Offshore Installation Manager (OIM) is the only person to permit the use of personnel transfer carriers.

The Duty holder's policy and local Installation rules on the use of personnel transfer carriers must include:

- Who is responsible for authorizing the transfer
- A clear definition of the circumstances for use
- How the procedure is complied with

Where it is necessary to transfer personnel to or from a vessel, the Crane Operator must always have a clear view of the embarkation areas, load path and landing areas.

Check the prevailing weather conditions, e.g., wind speed and sea state to ensure that they fall within the criteria listed in the Installation's safe operating procedures.

Establish radio communication with the Master of the supply vessel prior to commencement of the transfer operation.

Check that all other criteria required for the operation are met, e.g., standby vessel has been alerted, passengers are wearing the appropriate immersion suits and lifejackets, and that they have been briefed on all facets of the transfer. Particular reference shall be made to embarkation and disembarkation methods.

Ensure that the Banksman is on hand to take control of signaling in the event that visual contact with the carrier or landing area is lost.

11.6.7 Helicopter Operations

All crane movements must stop during helicopter operations unless dispensation has been given by the Helicopter Landing Officer (HLO) in consultation with the OIM to carry out special tasks.

If it is not a requirement to place the crane boom on the boom rest during helicopter operations, liaise with the HLO to ensure that the boom is positioned to prevent interference with the flying program.

The Crane Operator must ensure that, before leaving the crane unattended, the crane boom is placed in the boom rest and/or the slew brake applied. The crane must never be left parked with the boom in the proximity of the helicopter landing deck.

Always ensure that the aviation warning lights remain switched on when the boom is in the air and when A-frames or masts extend to 15m or more above the heli-landing deck.

11.7 Adverse Weather Conditions

At the commencement of each shift, carry out a function check of the boom minimum radius cut-out and the hook block (main/auxiliary) over hoist cut-outs. These checks shall be extended to include maximum radius and maximum payout limits, when they are fitted.

During lifting operations, adverse weather will increase the risks presented to personnel and equipment. To minimize the potential hazards associated with lifting operations, the Installation-specific adverse weather policy relative to lifting operations and, where applicable, the crane manufacturer's recommendations must be strictly adhered to at all times.

11.7.1 Electrical Storms

During electrical storms, lightning can have an adverse effect on the crane's structure, to personnel involved in crane maintenance activities and to general crane hoisting and lifting operations.

Past experiences suggest that where the threat of lightning exists, crane maintenance activities and crane operations must be suspended until such time as the risk of lightning affecting operations has abated.

11.8 Wire Rope and Sling Inspection, Replacement, and Maintenance

11.8.1 Wire Rope Introduction

Wire rope is a structural component of the crane requiring periodic replacement. Possible loss of strength can result from wear, abuse and other forms of deterioration. The wire rope shall be carefully selected, inspected and maintained. Rotation-resistant wire rope has special characteristics that require additional precautions.

The qualified operator or inspector who determines whether replacement is necessary shall be knowledgeable in the inspection and maintenance of wire rope.

11.8.2 Wire Rope Inspection

The wire rope inspection program should be established taking into consideration crane type, frequency of usage, history of maintenance, wire rope manufacturer's recommendations, and the crane manufacturer's recommendations.

Visual inspections of wire rope should be performed by qualified operators in pre-use and monthly inspections. Additional wire rope inspection should be performed by qualified inspectors during quarterly and annual inspections, and as the results of pre-use and monthly inspections may warrant.

Inspection tools to determine the condition of the wire rope should include, but not be limited to, the following:

- Steel tape
- Sheave groove gauges for worn sheaves used in accordance with API Recommended Practice 9B, latest edition
- Quality calipers and/or micrometers with at least 1/1,000th of an inch resolution
- Chalk or tape measure

During quarterly and annual inspections, or when ropes are changed on a crane, a number of areas affecting performance and rope life should be checked and corrective action taken as appropriate

11.8.3 Wire Rope Replacement

The various rope conditions noted upon inspection should be used to determine continued use or retirement of the rope in question.

Inspection records should be maintained to determine the time interval for retirement of the rope. Records should be readily available until the specific wire rope is retired. All observed rope deterioration should be recorded on these inspection records.

Wire rope unfit for use on cranes, slings or other load carrying devices should be removed from service and identified as unfit for use.

11.8.4 Wire Rope Maintenance

Wire rope is a machine with many parts that move and integrate with each other. Care and maintenance of this machine is as important as the other components of the crane.

Rope should be stored and handled to prevent damage and deterioration.

Unreeling or uncoiling of rope should be done as recommended by the rope manufacturer. When unreeling or uncoiling a rope, attention should be given to avoid the introduction of kinks or twists into the rope. Rotation-resistant rope may be more susceptible to this type of damage than other rope types.

Wire rope in the boom hoist and load hoist systems should be installed as recommended by the crane and/or wire rope manufacturer.

Before cutting a rope, seize the rope at either side of the cut location to prevent unlaying of the strands.

Care should be taken during installation to avoid contaminating, scraping or nicking the wire rope. Do not bend the rope about small pipe or crane components that might induce kinks or curling.

Wedge socketing or terminating of the wire rope should be performed or supervised by a qualified operator or qualified inspector.

Wire rope clips shall be drop-forged steel and shall be single saddle (U-bolt) or double saddle type clips. Malleable cast iron clips shall not be used. For spacing, number of clips, and torque values, refer to the clip manufacturer's recommendations. Wire rope clips attached with u-bolts shall have the u-bolt over the dead end of the rope and the live rope resting in the clip saddle. Clips shall be tightened evenly to the recommended torque. After the initial load is applied to the rope, the clip nuts shall be retightened to the recommended torque to compensate for any decrease in rope diameter caused by the load. Rope clip nuts should be retightened periodically to compensate for any further decrease in rope diameter during usage.

Rope should be maintained in a well-lubricated condition to minimize internal and external corrosion or friction. The best penetration of lubricant is obtained when the lubricant is applied as the rope passes over a sheave. Lubricants applied in the field should be compatible with the lubricant applied by the rope manufacturer following the recommendations of the rope and/or a crane manufacturer. Do not apply used oil because of contamination.

11.8.5 Wire Rope Testing

Wire rope manufacturer's break test certificate shall be supplied to the owner for all running ropes. Tests shall be performed as outlined in API Spec 9A, latest edition.

11.8.6 Sling Introduction

Due to the numerous types of material, construction, combinations and various types of hitches, it is beyond the scope of this document to list the load ratings of each individual sling type. The sling manufacturer should be consulted when a question arises concerning sling ratings, use, care and/or inspection.

11.8.7 Sling Use and Inspection

Slings shall be inspected and tested in accordance with the Wire Rope Sling User's Manual, Recommended Standard Specifications for Synthetic Polyester Roundslings, Recommended Standard Specifications for Synthetic Web Slings, ASME B30.9., latest edition, or other applicable standards.

All slings shall be visually checked prior to use by a qualified operator or qualified rigger.

The frequency of sling inspections should be determined by the owner based on the following:

- Frequency of sling use
- Severity of service conditions
- Nature or type of lifts being made
- Experience based on service life of slings used in similar applications

11.8.8 Wire Rope Sling Replacement

Deterioration that contributes to loss of the original strength should be taken into consideration and the sling retired as appropriate. Refer to the removal criteria of ASME B30.9. If there is any question relative to the integrity of the sling, the sling should be removed from service and properly disposed.

11.8.9 Sling Proof Loading and Labeling Slings of all types shall be proof loaded by the sling manufacturer per industry recommendations.

All slings, regardless of grade and construction, shall be labeled showing sling manufacturer and the pertinent working load limits, proof test certification number, length, diameter, and date of proof test.

Slings of other than wire rope construction shall be used, inspected and tested in accordance with the sling manufacturer and industry recommendations.

11.9 Record Retention

Training records will document signatures of those trained, dates of training, signatures of people providing training and syllabus or outline of course content. At a minimum, records of all training shall be kept on file.

All crane inspections, which are required initially, pre-use, monthly, quarterly, and annually, will be documented and maintained at the crane site location and readily available for review upon request.

12. FIRE PREVENTION

12.1 Purpose

This Procedure provides the minimum requirements for preventing and controlling fires.

12.2 Definitions

Combustible Liquid – liquids having a flash point at or above 140 °F (60 °C).

Combustible Material – liquids, solids, or gases that are relatively difficult to ignite and that burn relatively slowly (such as paper, wood, etc.).

Flammable Liquid – liquids having a flash point below 140 °F and a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100 °F.

Flammable Material – liquids, solids, or gases that are capable of being easily ignited, burning intensely, or having a rapid rate of flame spread (usually dusts, fine powders, or substances that ignite spontaneously at low temperatures).

Type A Fire Extinguisher – used for putting out fires of general combustibles, such as wood or paper.

Type B Fire Extinguisher – used on flammable and combustible liquids.

Type C Fire Extinguisher – used on electrical fires.

Type D Fire Extinguisher – used on fires of flammable metals and certain other exotic chemicals.

12.3 Process

12.3.1 General

An alarm system shall be established as part of the Emergency Response Plan for all ALPHA offices to alert all employees at the site in the event of an emergency. The alarm system should include lights, horns, sirens, or other appropriate devices to ensure that every employee is aware of project emergencies.

Smoking shall be prohibited in areas where fire hazards may exist, and "No Smoking" signs shall be posted.

12.3.2 Fire Extinguishers

A fire extinguisher rated not less than 2A shall be provided for each 3,000 square feet of building area.

One or more extinguishers rated not less than 2A shall be located on each floor of a multi-storied building. At least one 2A-rated extinguisher shall be located adjacent to each stairway in a multi-storied building. Extinguishers rated not less than 10B will be

provided within 50 feet of any area in which more than 5 gallons of flammable or combustible liquids or 5 pounds of flammable gas are used or stored.

Extinguishers shall be conspicuously located where they will be readily accessible and immediately available in case of a fire. Their locations shall be conspicuously marked. Extinguishers shall be installed on hangers or in the brackets provided and shall not be more than 5 feet from the floor. Extinguishers weighing more than 40 pounds shall be installed so that the top is not more than 3½ feet from the floor.

12.3.3 Training and Education

ALPHA has provided portable fire extinguishers for employee use in the workplace. All employees shall be provided training to familiarize themselves with the general principles of fire extinguisher use and the hazards involved with incipient stage firefighting.

Employees who have been designated to use firefighting equipment as part of an emergency action plan will receive training in the use of the appropriate equipment.

Training is required upon initial assignment to the designated group of employees and at least annually thereafter.

12.3.4 Inspections

Extinguishers shall be inspected monthly - or more often when circumstances warrant - to ensure that they have not been actuated or tampered with and to detect any damage. An annual maintenance inspection shall also be performed by a certified agency. Inspection tags shall be attached to extinguishers and the date of the inspection will be indicated after each inspection.

Each extinguisher shall have a durable tag securely attached to show the maintenance test and recharge date and the initials or signature of the person who performed the services. A discharged fire extinguisher shall be removed from service immediately and replaced with another extinguisher.

All equipment that has defects shall be tagged, immediately removed from service, and reported to his/her immediate supervisor.

12.3.5 Recharging

A plan shall be established for the prompt recharging and testing of fire extinguishers in accordance with NFPA standards.

12.3.6 Record Retention

A copy of all inspection records and certifications shall be kept on file.

13. GENERAL SAFETY RULES

13.1 Purpose

This procedure is written to provide directives to ALPHA employees about their responsibilities in the operations and management of ALPHA facilities and Owner Client worksites as related to the indicated general safety requirements that apply.

13.2 Scope

This procedure applies to all ALPHA employees. When work is performed at an Owner Client worksite, the Owner Client's program shall take precedence; however, this document will apply when an operator's program doesn't exist or is less stringent than ALPHA's procedures.

13.3 Responsibilities

The President (or designee) is responsible for developing and maintaining the General Safety Requirements program.

The Company Representative(s) is/are responsible for the implementation and maintenance of the plan for their worksite and ensuring all assets are made available for compliance with the plan.

Employees shall be familiar with this procedure and the local worksite General Safety Requirements program. They should follow all requirements, report unsafe conditions, and follow all posted requirements and use the safeguards, safety appliances and personal protective equipment while following all safe work practices and procedures for the workplace.

Overall enforcement of the safety rules, i.e. enforcement of violations, is held by all ALPHA supervisors, leads, managers, and representatives.

13.4 Process

13.4.1 Competency and Training

Workers shall be competent to operate equipment and perform job tasks. A competent worker means adequately qualified, suitably trained, and with sufficient experience to safely perform his/her work without supervision or with only a minimal degree of supervision. Work that may endanger a worker must be completed by a worker who is

competent to do the work or by a worker who is working under the direct supervision of a worker who is competent to do the work. All workers must be trained in procedures until they are competent. ALPHA shall permit only qualified by training or experience workers to operate equipment and machinery.

Training must include:

- Procedures to be taken in the event of a fire or other emergency
- The location of first aid facilities
- Identification of prohibited or restricted areas
- Precautions to be taken for the protection of the worker from physical, chemical or biological hazards
- Procedures, plans, policies and programs that ALPHA is required to develop and any other matters that are necessary to ensure the health and safety of the worker while the worker is at work.

ALPHA shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury.

13.4.2 Inspections

ALPHA shall ensure that frequent and regular inspections of the workplace, materials, equipment and of work processes and procedures by a competent person to identify any risk to the safety or health of any person at the workplace.

ALPHA Representatives, Managers, Leads, and Supervisors shall conduct periodic inspections of work areas to ensure employee(s), vendor(s), visitor(s), and Customer(s) is/are compliant with safety rules and policies.

ALPHA shall ensure that every dangerous occurrence is investigated as soon as is reasonably possible.

ALPHA must ensure that if a risk is identified we will correct any unsafe as soon as is reasonably practicable and, in the interim, take immediate steps to protect the safety and health of any person who may be at risk.

13.4.3 Housekeeping

Each work site shall be kept clean and free from materials or equipment that could cause workers to slip or trip. A floor or other surface used by any worker shall be kept free of obstructions, hazards and accumulations of refuse, snow or ice.

ALPHA requires that a worksite is sanitary and kept as clean as is reasonably practicable.

13.4.4 Safe Equipment Maintenance

ALPHA has a duty to ensure our worksites, company owned or Owner Client, working environments ensure, as far as is reasonably practicable, the health, safety and welfare of all personnel.

All equipment is to be maintained, safe to perform adequate strength for its purpose and free from obvious defects. Damaged and faulty equipment reporting procedures must be in place.

Where a defect is found in equipment ALPHA will ensure that steps are taken immediately to protect the health and safety of any worker who may be at risk until the defect is corrected and the defect is corrected by a competent person as soon as is reasonably practicable.

Any machinery, tool, material, or equipment which is not in compliance with any applicable OSHA requirement is prohibited.

The machine, tool, material or equipment shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from its place of operation.

Any worker who knows or has reason to believe that equipment under the workers control is not in a safe condition shall immediately report the condition of the equipment to supervision.

ALPHA prohibits compressed air to be directed towards a worker for the purpose of cleaning clothing or personal protective equipment used by that worker, or for any other purpose if the use of compressed air may cause dispersion into the air of contaminants that may be harmful to workers.

No worker is allowed to smoke in an enclosed place of employment, worksite or work-related area except in an area designated for smoking.

No person shall enter or remain at any workplace of employment while the person's behavior or ability to work is affected by alcohol, intoxicating beverages, drugs or other substance so as to create a nuisance or if his or her abilities are impaired so as to endanger any person, or to create an undue risk to workers, endanger the person or anyone else.

13.4.5 Improper Conduct

All workers shall engage in proper activity or behavior. Improper behavior that might create or constitute a hazard to any person is not acceptable. Improper activity or behavior includes horseplay, scuffling, fighting, practical jokes, and unnecessary running or jumping.

In the event, employee(s) is/are found to have engaged in improper conduct, a meeting with employee(s) to discuss the infraction will be held with his/her/their immediate supervisor at a minimum to inform and discuss the rule(s) or procedure(s) that was/were violated and appropriate corrective action(s) to be taken. Depending on the severity of the infraction, additional training, written reprimand, and/or time off may be warranted and initiated.

13.4.6 Industrial Hygiene

Where a worker is exposed to a potential hazard of injury to the eye due to contact with a biological or chemical substance, an eyewash station shall be provided.

A worker who may be exposed to a biological, chemical or physical agent that may endanger the worker's safety or health shall be trained to use the precautions and procedures to be followed in the handling, use and storage of the agent, in the proper use and care of required personal protective equipment, and in the proper use of emergency measures and procedures.

No food, drink or tobacco shall be taken into, left or consumed in any room, area or place where any substance that is poisonous by ingestion is exposed.

Protective clothing or other safety device that has been worn next to the skin shall be cleaned and disinfected prior to being worn by another worker.

Workers who handle or use corrosive, poisonous or other substances likely to endanger their health shall be provided with washing facilities with clean water, soap, and individual towels.

14. HSE AUDITING

14.1 Purpose

This Procedure provides an overview of the ALPHA HSE auditing process to include an assessment of the HSE Program implementation in field operations and applies to all projects where ALPHA has a recognized status with specific legal responsibility and major projects.

14.2 References

ISO 19011:2011 – Guidelines for auditing management systems

OHSAS 18001:2007

14.3 Responsibilities

President (or designee) will:

- Determine relevant ALPHA projects to be audited
- Assist with the alignment of relevant auditing parties
- Communicate the results of the audit with ALPHA management
- Share the best practices and lessons learned between projects

ALPHA Lead Auditor will:

- Establish the audit program, e.g. terms of reference, objectives, audit resources
- Make initial contact with project to initiate the audit
- Ensuring the conduct of audit according to the audit program
- Ensure the control of records and audit activities
- Ensure review and approval of audit report
- Ensure distribution to audit owner
- Ensure audit follow up if applicable

ALPHA Company Representative will:

- Accept terms of reference,
- Provide necessary logistical arrangements
- Approve audit report and assigned action parties and close out dates
- Monitor the progress against audit actions
- Approve completed actions and intervene where actions are overdue

14.4 Planning and Scheduling Audits

Audits will be scheduled on a risk-based approach where ALPHA holds/shares safety responsibility to include special projects

14.5 Method

14.5.1 Initiating Audit

ALPHA President (or designee) shall appoint the audit team leader for the specific audit.

Where a joint venture (JV) audit is conducted, it is important to reach agreement among the auditing JV partners before the audit commences on the specific responsibilities of each organization.

Terms of reference shall be developed by the lead auditor and issued to the Company Representative.

The audit terms of reference define what is to be accomplished by the audit and shall include the following:

Objectives

- Provide an objective assessment to which the site/project has implemented the HSE program in the field
- To capture successful HSE program implementations and identify program gaps for future ALPHA projects
- Share best practice from other ALPHA projects

Scope and Criteria

- The sponsor of the audit
- Owner of the audit report, e.g. Company Representative
- The audit process (documentation, field visit, and interview)
- The areas of interest and field execution

Agenda

- Agenda is to include detailed overview of scheduled activities throughout the audit

14.5.2 Selecting Audit Team

An audit team should be selected, taking into account the competence needed to achieve the objectives of the audit.

At a minimum the audit team shall consist of representation from the lead auditor, HSE, and senior management.

In deciding the size and composition of the audit team, consideration should be given to the following:

- Audit objectives, scope, criteria and estimated duration of the audit
- Whether the audit is a combined or joint audit

- The need to ensure the independence of the audit team from the activities to be audited and to avoid conflict of interest
- The ability of the audit team members to interact effectively with the auditee and to work together
- The language of the audit and an understanding of the auditee's particular social and cultural characteristics

14.5.3 Establishing Initial Contact with Auditee

The initial contact for the audit with the auditee (typically the company representative) will be made by the lead auditor. The purpose of the initial contact is to:

- Establish communication channels with the auditee
- Confirm the authority to conduct the audit
- Provide information on the proposed timing and audit team composition
- Request access to relevant documents including records
- Determine applicable site safety rules
- Make arrangements for the audit
- Agree on the attendance of interviewees and the need for guides for the audit team

14.5.4 Conducting Document Review

Prior to the on-site audit activities; requested records and previous audit reports should be reviewed to determine the complexity of the project scope. In some situations, this review may be deferred until the on-site activities commence, if this is not detrimental to the effectiveness of the conduct of the audit.

Note: If the documentation is found to be inadequate, the audit team leader should inform the auditee and those assigned responsibility for managing the audit program.

14.5.5 Conducting On-Site Audit Activities

An opening meeting will be held with the Company Representative and other pertinent personnel. The purpose of an opening meeting is to:

- Confirm the audit plan
- Provide a short summary of how the audit activities will be undertaken
- Confirm communication channels
- Provide an opportunity for the attendees to ask questions

14.5.6 Collecting and Verifying Information

During the audit, any findings shall be verified through sampling of documents, conducting interviews, and field observations. Only information that is verifiable may be utilized as credible audit evidence.

The audit will be undertaken against ALPHA HSE Audit Tool (see 14.6 ALPHA HSE Audit Tool) to capture and score the audit findings and to assist with the Final Report development.

The ALPHA HSE Audit Tool will provide a weighted score described below:

Green	Score \geq 80% Meets Expectation	#3- Meeting expectations. There is no desire/need to take more or less risk, therefore no additional actions or resources are needed to alter the framework. Continue to maintain and adapt the current framework.
Yellow	50% > Score < 80% Improvement Required	#2- Room for Overall Enhancement (Needs Enhancement) Actions are needed to enhance the design and/or operation of the control framework, in order to adjust the level of risk exposure. Gaps in the control framework are not systematic. The next level of management should be advised of and review the actions being taken to enhance the framework.
Red	Score \leq 50% Major Improvement Required	#1- Risk control framework is (Unacceptable). The next level of management should take urgent action to confront the situation and commit appropriate resources to immediate resolution of the weaknesses. The current framework and or execution present unacceptable risk. Senior management should monitor the implementation of agreed actions/improvements.

14.5.7 Preparing Audit Conclusions

The audit team should confer prior to the closing meeting to:

- To review the audit findings and any other appropriate information collected during the audit against the audit objectives
- Agree on the audit conclusions, taking into account the uncertainty inherent in the audit process
- Prepare recommendations, if specified by the audit objectives
- Discuss audit follow-up, if included in the audit plan

14.5.8 Conducting Closing Meeting

A closing meeting, chaired by the audit team leader, shall be held to present the audit findings and conclusions in such a manner that they are understood and acknowledged by the project/team and to agree, if appropriate, on the timeframe for the Company

Representative to present an action plan. Participants in the closing meeting should include the Company Representative, all relevant parties and may also include the client and others.

Any diverging opinions regarding the audit findings and/or conclusions between the audit team and the project/team should be discussed and if possible resolved.

Any findings that require urgent attention due to level of risk shall be communicated to company representative(s) during the closing meeting for immediate action.

14.5.9 Preparing Audit Report

The lead auditor shall be responsible for the preparation and contents of the audit report.

The audit report shall provide a complete, accurate, concise and clear record of the audit, and shall include or refer to the following:

- Audit objectives and scope
- Identification of audit team leader and members
- Dates and places where the on-site audit activities were conducted
- Audit criteria, findings, recommendations, and conclusions

14.5.10 Approving & Distributing the Audit Report

The audit report shall be issued within the agreed time period. If this is not possible, the reasons for the delay shall be communicated to the project and a new issue date shall be agreed.

The audit report shall be reviewed and acknowledged by the Company Representative. The Company Representative shall assign the responsible parties and establish a close out date for each recommendation.

14.5.11 Completing the Audit

All recommendations from the audit shall be documented on the ALPHA HSE Audit Tool and tracked to closure.

The Company Representative shall be responsible to approve all actions submitted for closure.

The audit is formally completed when all actions arising from the audit are closed out.

Projects/field sites determined to be in yellow or red status shall be subject to a six (6) month follow up audit.

14.6 ALPHA HSE Audit Tool

The ALPHA HSE Audit Tool includes:

- ALPHA HSE Audit Summary and Table
- ALPHA HSE Audit Form
- ALPHA HSE Field Execution Audit Summary and Table
- ALPHA HSE Field Execution Audit Form

Note: The ALPHA HSE Audit & Field Audit Tools are stored on our website.

15. HOUSEKEEPING

15.1 Purpose

The purpose of this Procedure is to outline basic housekeeping practices. Good housekeeping is a vital component in any safety program as well as a major factor in pollution prevention.

15.2 Responsibilities

ALPHA President (or designee) will provide guidelines for housekeeping standards.

ALPHA Company Representative, Managers and Supervisors will ensure that standards for good housekeeping are met at each worksite/facility.

ALPHA employees will follow good housekeeping guidelines at each worksite/facility.

15.3 Process

15.3.1 General Housekeeping Standards

All trash/debris should be placed in an appropriate container. Trash containers should not be filled to the point of overflow. Trash containers that are exposed to the elements should be covered to minimize storm water contact and to prevent the contents from being blown out.

All equipment, materials, products, or other items that are not currently in use, but are being stored onsite for future use, should be stored in a neat and orderly fashion in an appropriate area. These items should be inventoried and this list reviewed at least annually to determine if the items still have a viable use or value. If the items are deemed to have no potential use or value, they should be disposed of.

All surfaces should be free of standing water or chemical residues. This includes floors, shelves, and stacking equipment.

Any spills should be cleaned up immediately. In the event of a large spill or chemical release, contact local emergency services, supervisor/manager, and HSE accordingly. Note: Whoever is on the scene is responsible for ensuring that the area is cleaned-up.

15.3.2 Training

ALPHA employees shall receive awareness training on housekeeping standards.

15.3.3 Record Retention

The President (or designee) will maintain records of HSE training, New Employee orientations, and safety meetings in the Training Files.

Company Representative(s) will maintain all site specific orientations, safety meetings, and all job specific training at the worksite for the duration of the project. At the end of the project, all training records will be sent to the President (or designee).

16. INDUSTRIAL HYGIENE

16.1 Purpose

ALPHA is committed to providing a safe working environment. As part of this commitment, we will protect personnel from potential exposure to health hazard. This program establishes the criteria and procedures for determining the exposure potential of employees to hazardous agents. It will also assist in the compliance with the air contaminant compliance standards, and physical agent specific standards such as noise and heat.

16.2 Scope

This procedure covers risk assessment, monitoring prioritization, monitoring strategy, record keeping, and notification requirements for completing exposure assessment for ALPHA employees. The procedure covers work performed by ALPHA employees.

16.3 Definitions

Air Monitoring – Assessment of inhalation exposure to chemicals in the workplace through measurement of the chemical concentration in the ambient air.

Action Level - Generally the action level is half of the exposure limit, unless otherwise defined. When equal to or greater than this level, the employer must take action. This action can be in the form of training, more frequent monitoring or assessments and controls.

Breathing Zone – An area in a hemisphere near the mouth and forward of the shoulders with a radius of approximately 6 to 9 inches.

Ceiling Limit – An occupational exposure limit, which due to hazard of chemical cannot be time weighted.

Short-term Exposure Limit (SEL) – The short-term exposure limit was established to protect employees from chemicals that may cause harm when exposure to high levels over a short duration.

Time Weighted Average (TWA) – The adjustment of an air sample result over a specific period of time in order to compare the result with the respective exposure limit. Generally, the adjustment is over an 8-hour or 15-minute period, but at times the adjustment may be for a 12-hour work shift.

Agent – A chemical substance, physical energy source or biological material that is potentially harmful to human health.

Exposure Monitoring – Physical measurement of the amount of an agent contacted by an employee during the measurement period.

Homogeneous Exposure Group (HEG) – A group of employees for which the tasks, agents and process for all job titles in the group are substantially the same.

Job Title – A unique designation that classifies a worker according to his/her work area and homogeneous exposure group.

16.4 Responsibilities

16.4.1 President (or designee) and Company Representative(s) are responsible to:

- Communicate to employees on their responsibilities in this procedure
- Coordinate with the safety and health function completion of the exposure assessment plan developed under this procedure
- Notify health and safety function of any employee concerns and/or exposure potentials, which they have identified in their areas
- Assuring the implementation of this procedure

16.4.2 President (or designee) is responsible to:

- Administer the implementation of this employee exposure assessment procedure
- Coordinate the development of exposure groups
- Develop and implement written annual exposure assessment plan and overseeing exposure assessments
- Maintain record keeping of the monitoring data, for employee notification of the results, and for timely follow-up to employee concerns

16.4.3 Employees are responsible to:

- Notify their supervisor and/or health and safety function of any adverse or unanticipated reaction to chemicals
- Employees should also notify their supervisor and/or health and safety function if they have any exposure concerns

16.5 Basic Characterization & Homogeneous Exposure Group Definition

The work areas, job classifications will be characterized utilizing the guidance provided in Attachment A. This information will provide the basis for development of an exposure assessment plan.

The facility job titles defined will be sorted into Homogeneous Exposure Groups (HEGs) utilizing tasks, agents and processes. The goal is to have exposures for all the job titles in the HEG to be substantially the same.

Definition of the HEGs will be based on professional judgment, agents identified, and the task inventories developed.

HEGs will be redefined if monitoring data suggest that exposures to all workers in the group are not the same.

The HEGs and there definition will be reviewed periodically.

16.6 Qualitative Risk Assessment

A Qualitative Risk Assessment using an exposure and health rating (Attachments B & C) will be performed for each agent in each HEG.

A consulting industrial hygiene resource will be used to support development and/or review the risk assessments.

The exposure rating will be based upon professional judgment and the task descriptions prepared in the previous section. The information provided in Attachment B will be used to identify the exposure rating.

The health-effect rating will be developed utilizing professional judgment and the health-effects data collected in the previous section. The information provided in Attachment C will be used to identify the health effect rating.

The matrix provided in Attachment D will be used to classify and rate the risk of the identified exposures.

16.7 Interpretation and Decision-Making

The qualitative risk assessments will be used to define and prioritize monitoring needs.

Each of the qualitative exposure risks will be evaluated and classified as unacceptable, acceptable, or exposure information needed. This evaluation will be based on the guidance below:

- Unacceptable risk – A high probability of damage to employee health exists. Control measures shall be implemented immediately or the process shall be shut down. Once controls are implemented, a reevaluation of the risk will be completed.
- Acceptable risk – The probability of damage to employee health is negligible and further evaluation is not needed.
- Exposure information needed – In order to determine risk, additional exposure monitoring is needed.
- The risks that fall into the information required category or re-evaluation category will be included into the monitoring plan developed in Section 20.9.

16.8 Exposure Monitoring

The exposure monitoring will be performed for the following main objectives: baseline, maintenance and diagnostic. The following are guidelines around the use of each monitoring type:

16.8.1 Baseline Monitoring

The purpose of baseline monitoring is to establish the exposure level of the employees in a HEG to an agent at the time of the monitoring. Baseline monitoring should be performed when a new process is installed or when an existing process has not had baseline monitoring.

Typically a minimum of six personal samples representative of normal production activity are required on members of the HEG. The people monitored shall be randomly sampled and two or more of the six shall be collected on back shifts if applicable.

If the hazard from the agent is chronic, or the PEL or TLV is expressed as a TWA, the samples shall be full shift time-weighted-average. If the hazard is acute, the samples shall be for fifteen minutes, or the duration of the exposure, whichever is longer.

16.8.2 Maintenance Monitoring

Maintenance monitoring is performed to determine whether the exposure of a HEG to an agent has changed since the baseline monitoring.

Maintenance samples shall be collected at the rate of at least one sample every two (2) years or more often, depending on the database for that agent/HEG.

16.8.3 Diagnostic Monitoring

Diagnostic monitoring is done to identify the source of an exposure detected by baseline monitoring. Either area monitoring, direct-reading instruments or personal monitoring during specific tasks may be used.

16.9 Exposure Assessment Plan

Using the risk rating prioritization, type of monitoring required and professional judgment, an annual and long term exposure assessment plan will be developed and provided in Attachment E.

The plan will be developed with support of and approval of corporate industrial hygiene.

16.10 Monitoring Interpretation and Decision-Making

When a monitoring data set has been collected for a HEG, the following information will be determined (Note: Corporate industrial hygiene will provide guidance and support in calculating this information.):

- Determine whether the data better fits a normal or log-normal distribution – This can easily be plotted with Logan software
- Calculate the appropriate mean and standard deviation – arithmetic (normal) or geometric (log-normal).

Once a mean exposure has been determined the guidance to determine next steps are as follows:

- The mean exposure will be compared to the most appropriate OEL (i.e. PEL, TLV or internal limit) for the monitored substance
- If the mean exposure exceeds the OEL, immediate corrective action is necessary (Note: Personal protective equipment may be used to reduce exposure on an interim basis, but the permanent solution shall be to eliminate the exposure through engineering controls or substitution of a less hazardous material)
- If the mean exposure is between one-half the OEL, another 6-sample set will be collected within 6 months, or as soon thereafter as process scheduling allows (Note: The entire database, i.e. all 12 samples, shall then be evaluated)
- If the mean exposure is less than one-half the PEL or TLV, a maintenance-monitoring schedule should be initiated, with the sampling frequency to be determined by professional judgment

16.11 Recommendations and Reporting

A consulting industrial hygienist will prepare a written report of each monitoring set. The report will be communicated to the President (or designee).

Monitoring results will be reported in writing to members of the HEG within 15 working days of receipt from the analytical lab. Results will either be given to each employee individually in a letter, or posted in the workplace. Numerical results from all samples will be included in the notification.

A file for each HEG in a unit or area will be maintained:

- A sub-inventory of the chemical and physical agents in the unit to which the HEG could be exposed, with the hazardous chemicals, i.e. those that are regulated or known to be hazardous, identified

Monitoring data:

- Monitoring information will be inputted and maintained in an exposure monitoring database by designee of President

16.12 Re-evaluation

Workplaces or HEGs shall be reevaluated according to the following criteria:

- Baseline monitoring will be repeated whenever any of the following occurs:
 - Process change
 - Substance change
 - Work-practice change
 - Engineering-control change
 - Baseline monitoring may need to be repeated in cases of:
 - Employee complaints
 - New health-effect data
 - New regulations

The President (or designee) shall use professional judgment to determine which agents to re-monitor following process/practice changes or for other changes as listed above on a case-by-case basis.

A default schedule for re-monitoring in the absence of any of the specific reasons listed above should be developed by the responsible industrial hygienist. Re-monitoring can be done on one, two, or three-year intervals, depending on the hazard potential of the agent and the results of previous monitoring.

This exposure monitoring plan will be evaluated on an annual basis.

ATTACHMENT A

Workplace Characterization/Homogenous Exposure Group Definition Guidance

The following is some guidance to be used in the definitions of homogeneous exposure groups.

- a) Identify the boundaries of the area to be characterized. The facility will be divided into units/areas containing a general process, or group of laboratories conducting similar operations with similar agents.
- b) Develop a brief process or operation description and simplified flow diagram for each unit or area.
- c) Divide the unit or area into separate "workplaces". A workplace may include an entire area/unit, or a fraction of that unit, e.g., a single floor of a multi-floor structure. A defining criterion is that one or more employees spend a majority of their time within the boundaries of the workplace.
- d) Prepare an agent inventory of all the substances and physical agents present in the workplace.
- e) Compile basic health-effects information on each agent. As a minimum, a MSDS for each chemical shall be available.
- f) Complete a workforce and task inventory. This is a list of the workers in a unit and the tasks that each performs. The listing should include:
 - Job classifications (A-Operator, Helper etc.)
 - Number of each classification in the unit
 - Workplace of the job classification
 - Tasks performed by job classification
 - Identify the shift length for each job title
- g) If payroll job classifications are not adequate to characterize exposure, a unique title will be given to each job classification/workplace combination.

Characterize maintenance tasks. Monitoring of maintenance workers shall be based on evaluation of a specific task involving potential exposure to a specific agent.

ATTACHMENT B

QUALITATIVE EXPOSURE RATING

Rate potential exposure's by using the scheme below:

For example: Emptying bags of a low-density, finely-divided powder into a tank with no ventilation controls might be a high-exposure-potential task, while drumming a low-volatility liquid in a vented drumming station would have a low exposure potential.

CATEGORY	DESCRIPTION
A	Low exposure. i.e., Infrequent contact with agent at low concentrations to moderate concentrations.
B	Moderate exposure: i.e., Infrequent contact with agent at high concentrations or frequent contact with agent at low concentrations to moderate exposures.
C	High Exposure: i.e., Frequent contact with agent at moderate concentration.
D	Very high exposure: i.e. Frequent contact with agent at high concentrations or Infrequent contact with agent at very high concentrations
Rating should not take into consideration the use of personal protective equipment. Infrequent/frequent definitions depend on the hygienist, the workplace, and the agents; consistency in application.	

ATTACHMENT C

QUALITATIVE HEALTH EFFECT RATING

To rate physical agents, e.g. noise and heat, according to their perceived intensity and estimated exposure duration.

Rate chemical agents by such a simple scheme as below:

CATEGORY	HEALTH EFFECT
1	Limited health effects of concern, i.e.: Acute toxicity classified neither "highly toxic" nor "toxic". Not a severe or moderate irritant Not rated by IARC or NTP; no reproductive, skin, eye or sensitizing effects.
2	Moderate health effects of concern. Severe, reversible health effects of concern Rated carcinogen category 3 or not rated by IARC. Not rated by NTP.
3	Severe health effects of concern, i.e., Acute toxicity classified as "toxic; severely irritating to skin or eyes. Classified as a 2A or 2B by IARC. Classified may reasonably be anticipated to be carcinogenic" by NTP. Classified as a reproductive toxin

	under California Proposition 65.
4	Life threatening or disabling injury or illness. i.e., Acute toxicity classified as "highly toxic"; corrosive to skin or eyes; sensitizes. Regulated as a carcinogen by OSHA. Rated carcinogen category 1 by IARC. Classified as "known to be carcinogenic" by NTP. Classified as a reproductive toxin under California Proposition 65.

ATTACHMENT D

SAMPLE COLLECTION PRIORITY

Assess the risk, based on the health-effect and exposure ratings along with professional judgment.

A risk of 1 does not need monitoring. A risk of 3, 4, or 5 will be monitored. The remaining possible combinations require the use of prudent professional judgment to determine their classifications.

		Exposure Probability			
		A	B	C	D
H	I	1	1	2	3
	II	1	2	3	4
	III	2	3	4	5
	IV	3	4	5	5

ATTACHMENT E

ANNUAL/LONG-TERM AIR MONITORING SCHEDULE

Hazard	HEG and Task or Location	Risk Rating	Number of Samples	Sample Type (TWA, STEL, Ceiling)	Date last Sampled	Sample Frequency Required	Date required	Scheduled date	% Completed

17. JOB SAFETY ANALYSIS (JSA)

17.1 Purpose

The purpose of this Procedure is to describe the practices and procedures use of the Job Safety Analysis (JSA) Process.

The JSA process is a system of controls for all personnel performing tasks/duties that may have the potential to cause harm either to people, the environment, or equipment.

The JSA is a tool that applies all identified hazards to a management process that addresses each hazard at each step of the proposed task.

The final result will be the identification and elimination/mitigation of all hazards and a set of procedures to carry out the task(s) in a safe manner.

17.2 Responsibilities

ALPHA President (or designee) will educate and assist personnel on JSA development.

ALPHA Company Representatives will:

- Participate in the development of all JSA's
- Periodically review JSA's with employees
- Make sure that the responsibility for recommended control measures is assigned to specific people
- Make sure that employees are following recommended control measures outlined in the JSA's
- Make sure that work does not commence until after the JSA's are approved/signed

ALPHA Employees will:

- Participate in the development of JSA's
- Periodically review JSA's prior to engaging in a task
- Follow and implement recommended control measures on the JSA's
- Notify his/her supervisor when corrections/additions are needed to the JSA

17.3 Process

17.3.1 Identify Task and Organize Team

The first step is to assess the operation to determine the high risk tasks and the other tasks that may require a JSA. Arrange a meeting of all personnel involved in or affected

by the task. Jobs to be analyzed should be prioritized in the order of greatest risk. The following is a guide to assist in prioritizing:

- **Incident Frequency** – a job that has repeatedly produced incidents is a candidate for a JSA, e.g., the greater the number of incidents associated with the job, the greater its priority
- **Incident Severity** – jobs that have produced an injury resulting in lost time or requiring medical treatment should be analyzed
- **Judgment and Experience** – many jobs qualify for JSA because of the potential hazards involved, even though no incidents have happened yet
- **New Job(s)/Task(s), Non-Routine Job(s)/Task(s), or Job/Task Change(s)** – prime candidates for JSAs because these jobs/tasks are not done often or possibly have never been done at a particular site and the hazards of the job/task might not be fully known
- **Routine Job(s)/Task(s)** – in routine or repetitive jobs/tasks with inherent hazards, the employee is repeatedly exposed to these risks

17.3.2 Break-Down the Task

Reduce the task into basic steps. Each step of the analysis should provide a statement of what is to be done and in what order. At this point, there is no need to provide the details of who is going to carry out the task or exactly how.

Each step should briefly describe what is done and should be listed on the form in the order it is accomplished. Avoid the common errors of making the break-down so detailed that an unnecessarily large number of steps result or making the job breakdown so general that basic steps are omitted. If more than fifteen steps result from the analysis, consider breaking that job into more than one JSA.

17.3.3 Identify Hazards and Potential Incidents

Examine each step for hazards – either caused by the task to be carried out or by the work environment. Consider the consequences of departure from expected circumstances. The main activity in the JSA procedure is to determine the hazards and the potential for incidents at each step of the task. Questions should be asked at each stage to encourage debate on the various risks and hazards. Existing procedures and guidelines should be consulted. Useful questions are listed below:

- Can a person be struck by, struck against, caught in, on, or between anything?
- Can a person strain himself or become overexerted?
- Is it possible to slip, fall, or trip?
- Will anyone be exposed to gas, heat, fumes, pressure, or chemicals?
- Is it possible for an individual to injure other people while carrying out the task?
- Can damage occur to equipment or the installation?

- Is there a possibility of environment damage?
- Is there a potential for any stored energy to be released?

17.3.4 Control each Hazard

Controls should be developed to deal with the identified hazards. Examples of controls are listed below in order of preference (Highest to Lowest):

- **Engineering Controls – Less Hazardous Way to Do Job**
 - Can an engineering revision take place to make the job or work area safer?
 - Is there a less hazardous way to do the job? This requires determining the work goal and then analyzing various ways to reach the goal to see which way is safest.
 - Are there work-saving tools and equipment available that can make the job safer?
 - Can a less hazardous material or substance be used?
 - Can a guard be developed or put into place?
 - Can the work area be isolated to minimize exposure?
 - Can the frequency of the hazardous step or task be reduced?
 - Example: It has been identified that a person will be required to lift a heavy load during the task. Can a mechanical lifting device be employed to reduce the risk of back injury?
- **Administrative Controls – Change Job Procedures**
 - If hazards cannot be engineered out of the job, can the job procedure be changed? Be careful here because procedures are designed to help eliminate the hazards. If the job changes are too difficult, long or uncomfortable, then the employee will take risks or shortcuts to avoid these procedures. Caution should be exercised when changing job procedures to avoid creating additional hazards. Note that the management of change process is required when changing procedures.
 - Example: If a task requires the use of oxy-acetylene cutting equipment, it could be written into the procedure that a person will be assigned fire-watch duties during such operations.
- **Personal Protective Equipment (PPE)**
 - Can personal protective equipment (PPE) be used? Use of PPE should always be the last consideration in reducing hazards of a job. PPE usefulness depends entirely on the worker's willingness to use it faithfully. It is always better to control the hazards of a job by administrative or engineering revisions. PPE should only be considered as a temporary solution to protecting a worker from a hazard or as supplemental protection to other solutions.

Some hazards will be easily controlled with suggestions made to upper management. For example, administrative revisions are the easiest to make because there is little if any capital outlay. New, better or additional PPE normally takes minimum expenditures and can be instituted promptly. On the other hand, work-saving tools and equipment may take large expenditures, and thus they may have to be phased in over time as tools or equipment is replaced. Engineering revisions may also take time to design and install. Changes in physical conditions may have to be engineered.

17.3.5 Assign Responsibility for Controls

In order to guarantee that the recommended control measures are implemented, it is extremely important to assign direct responsibility for each control measure developed during the JSA process.

For example: For a task that requires replacement of a hydraulic pump, a recommended control measure would be to apply lockout/tagout to the energy source feeding the pump's drive motor. The correct way to describe this control measure on the JSA would be; "_____ will apply lockout/tagout to the energy source".

Prior to the task being carried out, the names of specific people assigned to carry out control measures will be inserted into the blank spaces and those persons will be made aware of his/her responsibilities. This can be achieved at the pre-task toolbox talk when the JSA is reviewed by all of the task's participants.

In situations where responsible persons are rotated to another task, it is the duty of that person to make sure that his/her responsibilities are communicated to the person replacing him/her.

By using this method, specific duties and responsibilities are clearly defined and effectively carried out.

17.3.6 Close-Out

Completed JSA's should include the following information:

- The scope of work
- A break-down of the job, associated hazard(s) and control measure(s)
- Blank spaces where specific names can be entered as being responsible for implementing control measures
- Names and positions of all members involved in the discussion
- Spell out any abbreviations used

A copy of the JSA should be attached to the relevant work permit and/or remain in close proximity to the worksite. All members of the work force should be familiar with the contents of the document.

17.4 Record Retention

Documentation of JSA training shall be kept on file.

Completed JSAs must be maintained for two years.

17.5 JSA Form

Blank JSA Form is located on our website and is available for download and use.

18. MANAGEMENT OF CHANGE

18.1 Purpose

This Procedure explains the practices and/or procedures required in making sure that safety is maintained when changes are made in personnel, processes, systems or equipment.

18.2 Scope

This section specifically applies to ALPHA operations involved in any modification including changes in operations, processes, products, or production; repairs or mechanical improvements to machinery or a change in personnel; or acquiring new equipment.

Note: Owner Client specific changes are to be managed through their own Management of Change (MOC) process with any request of assistance by ALPHA employees approved by an appropriate ALPHA Company Representative (or designee).

18.3 Definitions

Change – A change is any alteration to personnel, equipment, materials, processes, products, or procedures, including additions or deletions. The alteration may be temporary or permanent. In order to classify the level of the change, the change (or changes) must be clearly and accurately stated.

Handover Notes – A document created by an employee, who is about to leave his/her position(s) either temporarily or permanently, to assist the successor with carrying out the duties of the position(s).

Management of Change (MOC) Request Form – A form used for requesting approval of a modification. A MOC request form, along with any additional supporting documentation, is completed and approved by appropriate individual(s) at each step in the management of change procedure.

Temporary Change – A change with a clearly specified, limited duration.

Updated Procedure – A notation or revision has been inserted into the procedure(s) prior to the next printing.

18.4 Responsibilities

ALPHA Company Representatives will provide support and assistance with the preparation of change requests; implementation of the MOC process, and communication of such changes to affected personnel and management, where applicable.

18.5 Process

Management of change (MOC) establishes procedures to identify and control hazards associated with change and maintain the accuracy of safety information. Changes can be minor with a small likelihood of compromising safety or environmental protection; however, they do have the potential to disrupt, injure or could cause the loss of business for the company. Prior to any changes taking place, the MOC process must be initiated and include employee consideration/consultation regarding the development and implementation of newly revised procedures.

18.5.1 Hazard Analysis

The purpose of a hazard analysis is to identify, evaluate, and (if needed) minimize the likelihood of safety or environmental incidents. The hazard analysis is to be presented to management in a written report. This report will identify the hazards and the recommended steps and solutions to be taken to eliminate them. As there are many different types and differing amounts of detail involved in a given hazard analysis method, it is beyond the scope of this process to recommend a type.

18.5.2 Safe Work Practices

Safe Work Practices are to be designed and written to minimize the risks associated with operating, maintaining, and modifying activities and the handling of materials and substances that could affect safety or the environment.

Safety and environmental policies and practices will need to be agreed upon prior to beginning work on an ALPHA and/or Owner Client facility along with training and informing employees affected by such operational changes prior to startup.

18.5.3 Investigation of Incidents

An investigation of incidents should be established which outlines the procedures to investigate serious incidents or incidents that have the potential for serious safety or environmental consequences. Refer to *Incident Reporting and Investigation* section of this manual for more information.

Secure the incident scene by protecting people and the environment. The intent of the investigation should be to learn from the incident and help prevent similar incidents in the future. These findings should be documented and retained for the next hazard analysis, or for a minimum of three years, whichever is greater.

18.5.4 Reduction of Uncontrollable Releases and Process Hazards

As a result of implementing “Management of Change” in an organization, people become aware of the hazards associated with changes; therefore, mitigating the consequences of uncontrolled releases and other safety or environmental incidents. The solutions, incident reductions, and awareness of the corrective action taken must be communicated to management.

18.5.5 Personnel Changes

In the event an ALPHA employee is about to leave his/her position(s) either temporarily or permanently, ALPHA’s President (or designee) may request that *Handover Notes* be completed to assist the successor with carrying out the duties of the position(s).

Other than routine personnel vacancies and replacements, rotation and shift changes that do not require additional MOC action, any supervisory personnel changes will require this Management of Change policy and procedure(s) be used.

Note: A blank *Handover Notes* template is located on our website and is available for download and use.

18.6 Training

Training will be established and implemented so that all personnel are trained to work safely and are aware of environmental considerations in accordance with their duties and responsibilities. This training should include an orientation, emergency and non-emergency, chemical understanding, fire protection, lifesaving, and survival, as appropriate.

18.7 Record Retention

All safety and environmental information must be evaluated, and the human factor is to be considered, when a new design is implemented or when any modifications are made.

Training records will document signatures of those trained, dates of training, signatures of people providing training and syllabus or outline of course content. Documentation of MOC training shall be kept on file.

18.8 MOC Request Form

Note: A blank *Management of Change (MOC) Request Form* is located on our website and is available for download and use.

Management of Change (MOC) Request Form
Date of Request:
Change Request Initiator (name, location, phone):
Description of Change:
Reason for Change:
How does the proposed change affect the safety vulnerabilities? (Safety, Health, and Environmental Considerations):
Resulting Changes (to existing O&M procedures, inspection and testing procedures, process/facility documents/drawings, safety plans, training requirements, etc.):
Company Representative Approval (name and date):
President (or designee) Approval (name and date):

19. NOISE EXPOSURE / HEARING CONSERVATION

19.1 Purpose

To manage ALPHA employee noise exposures and prevent hearing loss by performing employee education, noise level assessments, implementing noise reduction through engineering and administrative controls, and the use of hearing protection to control noise levels.

19.2 References

OSHA 29 CFR §1910.95 – Occupational Noise Exposure

OSHA 3074 (2002) – Hearing Conservation

19.3 Definitions

Action Level – A noise level at or above 85 dBA for an 8-hour time-weighted-average.

Attenuation – The rating of hearing protectors in decibels (dB). It is the amount of sound reduction offered by hearing protectors, acoustical insulation or silencing equipment.

Audiogram – A record of hearing loss or hearing level measured at several different frequencies (usually 500 to 6,000 HZ). The audiogram may be presented graphically or numerically. Hearing level is shown as a function of frequency response.

Audiometer – A signal generator or instrument for measuring objectively the sensitivity of hearing in decibels referred to audiometric zero.

Audiometry – The measurement of hearing.

Baseline Audiogram – The audiogram against which future audiograms are compared.

dBA – Adjusted decibel. – Unit of sound intensity.

Decibel (dB) – A dimensionless unit used for expressing a unit of sound.

Ear Protection – The use of devices, e.g., earplugs, to protect an individual's hearing in high noise level areas.

Frequency – The time rate of repetition of a periodic sound expressed in units of Hertz (Hz).

Hearing Loss – The amount, in decibels, by which the threshold of audibility for the ear exceeds a standard threshold shift.

Hertz (Hz) – The unit of frequency in cycles per second.

Noise Dose – The ratio, expressed as percentage, of the time integral over a stated time or event.

Noise Dosimeter – An instrument that integrates a function of sound pressure over a period of time in such a manner that it directly indicates a noise dose.

Noise Reduction Rating (NRR) – The difference in sound levels at a given point before and after acoustic treatment.

Presbycusis – The loss of hearing specifically associated with aging.

Sound Level Meter – Instruments for measuring sound-pressure levels in decibels, usually beginning at 75Hz and continuing through 10,000Hz.

Threshold – The point at which a person begins to notice a tone becoming audible.

Standard Threshold Shift (STS) – A change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear.

Time-Weighted Average (TWA) – An amount or quantity (expressed as a level or dose) that represents the length of exposure to a potentially harmful influence (e.g. noise) averaged out over a stated period of time, such as an 8-hour work day.

19.4 Process

19.4.1 Monitoring

Area monitoring should be conducted periodically to determine the areas where noise exposures equal or exceed the established safe noise levels. Area noise monitoring should be conducted when facility modifications or the addition of new equipment or a process may impact the area noise level. A noise survey should be conducted at work areas where it is difficult to communicate at normal speech levels or if shouting is required to communicate at close distances. Area monitoring should be used to determine the boundaries of high noise areas.

Personal sampling may be conducted when high noise areas have been identified to determine the noise exposure of employees working in and around high noise areas.

Employee exposure measurements should be obtained by the use of noise exposure monitors or dosimeters.

Each facility/location must institute a hearing conservation program if area monitoring identifies noise exposure levels at or above the action level. The following are required for a hearing conservation program:

- A written local plan
- Annual audiometric testing
- Training of affected employees

19.4.2 Audiometry

Audiometry, the measurement of hearing, is central to a hearing conservation program because all of the follow-up activities and program evaluations are based upon hearing measurement results.

Objectives of audiometry are as follows:

- To obtain a baseline audiogram that indicates the individual's hearing ability at the time of the pre-placement examination or induction into a hearing conservation program
- To provide a record of an employees' hearing sensitivity
- To check the effectiveness of noise-control measures by measuring the hearing thresholds of exposed employees
- To record any hearing threshold shift in the course of employment
- Schedule for audiometry is as follows:
 - a) A baseline audiogram is obtained within 6 months of an employee's first exposure to noise at or above the action level and will be preceded by at least 14 hours without exposure to worksite noise. Unless otherwise stated by local regulatory requirements.
 - b) Audiograms will be repeated annually for all employees who have been exposed to noise at or above the action level.
 - c) A comparison of the annual and baseline audiograms will be made in order to determine any shift in the standard threshold.
 - d) The employee will be notified in writing of a shift in the standard threshold within 21 days of the determination. The use of hearing protection will be re-evaluated and/or refitted, if necessary. The employee will also be provided with a medical evaluation as appropriate.

19.4.3 Administrative and Engineering Controls

Administrative and engineering controls should be implemented to reduce noise exposure to within safe noise levels (below 90 dBA) or to the greatest extent feasible.

Unless otherwise stated by local regulatory requirements. Administrative and engineering controls to reduce noise include:

- Purchasing equipment with noise abatement controls

- Daily or periodic rotation of employees from a high noise area to a location of lower noise levels so the daily noise exposure is not exceeded
- Rotation of the production and equipment schedules
- Substitution of machines
- Substitution of processes
- Construction of barriers, screens, and other dampening materials around the equipment
- Isolation of the operator in a relatively soundproof booth
- Maintenance procedures

Administrative controls should be used when all feasible engineering controls have been implemented and during the interim process of implementing engineering controls.

19.4 Hearing Protection

Appropriate hearing protection should be worn to protect employees from excessive noise levels when engineering methods prove to be technologically unfeasible, cost prohibitive, or when engineering controls are being evaluated or implemented. Each facility/location must provide hearing protection when noise exposure is at or above a TWA of 85 dBA and require its use when at or above a TWA of 90 dBA. Hearing protectors will be evaluated for the specific noise environments in which they will be used.

Hearing protection shall be purchased by ALPHA at no cost to the employee(s) and replaced as necessary for all ALPHA employees exposed to an 8-hr. time-weighted average of 85 decibels or more.

19.5 Training and Education

Training will be provided to all ALPHA employees who are exposed to noise levels at or above 85 dBA TWA. Training will be conducted annually and will include:

- How noise levels can affect hearing
- Purpose and types of hearing protection
- Selection, fitting, and care of hearing protection
- How to detect when engineering controls fail
- Purpose and process of audiometric testing

Training will be updated when there are changes in work environment or personal protective equipment (PPE).

19.6 Recordkeeping and Reporting

Records of results from audiometric testing of each affected ALPHA employee are maintained for at least the duration of employment.

Records of worksite noise exposure tests are kept on file for a minimum of two years.

Records of HSE training, New Employee orientations, and safety meetings will be maintained.

Company Representatives will maintain all site specific orientations, safety meetings, and all job specific training at the worksite for the duration of the project. At the end of the project, all training records will be sent to the President (or designee).

20. PROCESS SAFETY MANAGEMENT (PSM) – CONTRACTOR RESPONSIBILITIES

20.1 Purpose

As a contractor, ALPHA does not have a written Safety and Environmental Management Program (SEMP). This Procedure identifies the means in which ALPHA will ensure compliance to the Owner Client SEM, OSHA, and BOEMRE Standards. It is also intended to prevent the potential safety hazards and environmental impacts that may be realized by our employee work activities.

20.2 References

OSHA 29 CFR §1910.120: Process Safety Management of Highly Hazardous Chemicals

API RP 75 (R2008): Safety and Environmental Management Program for Offshore Operations and Facilities

20.3 Responsibilities

President (or designee(s)) is/are responsible for evaluating the Owner Client Safety Environmental Management Plan and their site specific safe work procedures to ensure that all ALPHA personnel working on the project are trained.

The Company Representative shall ensure that a bridging document is in place that ensures that ALPHA policies and practices are consistent with the Owner Client's programs. Client's and ALPHA' records/documentation along with ALPHA's own SEM will be maintained in electronic format in grouped files/folders on our website. A back-up of these forms will be maintained on disk(s) or thumb drive(s) in a separate location to prevent accidental loss and/or deterioration due to fire, storm, etc. This method will also allow for easy retrieval.

20.4 Definitions

Process Safety Management (PSM) – The proactive identification, evaluation and mitigation or prevention of chemical releases that could occur as a result of failures in process, procedures or equipment. The major purpose of process safety management of highly

hazardous chemicals is to prevent or minimize consequences of catastrophic releases of toxic, reactive, flammable or explosive chemicals in various industries.

Safety & Environmental Management Program (SEMP) – A management program designed to promote safety and environmental protection during the performance of offshore oil and gas operations.

20.5 Process

ALPHA as a contractor has certain obligations to fulfill in order to comply with established PSM and SEMP programs. ALPHA responsibilities are as follows:

- ALPHA shall ensure that safety policies and procedures are made available to all operator clients
- ALPHA shall ensure that all of their employees are trained in their respective work classifications
- ALPHA shall assure that each of their employees are trained in the work practices necessary to safely perform his/her job
- ALPHA shall assure that each employee is instructed in the known potential fire, explosion, or toxic release hazards related to his/her job and the process, and the applicable provisions of the emergency action plan upon assignment to an Owner Client worksite
- ALPHA shall document that each employee has received and understood the training required by this paragraph
- ALPHA shall document the date of training and the means used to verify that the employee understood the training
- ALPHA shall assure that each employee follows the safety rules of the facility including the safe work practices required with 1910.119(f)(4) and Section 6 of API RP 75
- ALPHA shall advise the employer of any unique hazards presented by ALPHA's work, or of any hazards found by ALPHA's work
- ALPHA will assure that trade secret information will be kept in confidence as process safety information is released to them
- ALPHA management will review SEMP documentation at least annually and upon notification of any required/necessary changes and/or updates to remain compliant or improve the program (*Note: Management review finding and/or actions will be documented and maintained in a separate file electronically on our website.*)

ALPHA employees shall participate in all as directed by the Owner Client PSM and SEMP requirements, including:

- Employee Participation
- Process Safety Information (PSI) / Safety and Environmental Information

- Process Hazards Analysis (PHA)
- Operating Procedures
- Training
- Documentation and Recordkeeping
- Pre-Startup Safety Review (PSSR)
- Mechanical Integrity / Quality Programs
- Hot Work Permits / Safe Work Practices
- Management of Change (MOC)
- Incident Investigation
- Compliance Audits
- Emergency Planning and Response
- Trade Secrets

ALPHA employees shall follow safe work practices established by the employer. ALPHA has developed and implemented safe work practices to provide for the control of hazards during operations, such as lockout/tagout; confined space entry; opening process equipment or piping; hot work; and control over entrance into the Owner Client facility.

All ALPHA employees will receive site specific orientation from the Owner Client when reporting to the work-site.

ALPHA has an employee evaluation process used during the initial hiring process that will ensure that the employee is competent in their respective job classification and is familiar with offshore oil and gas operations.

To comply with 1910.119(f)(4), ALPHA employees are required to complete all required documentation for any permit-required activities.

ALPHA shall not perform hot work until a hot work permit is obtained from the Owner Client Representative. The permit shall document those provisions of OSHA 29 CFR §1910.252(a) has been met.

ALPHA employees must immediately report all accidents, injuries and near misses. An incident investigation must be initiated within 24 hours. Resolutions and corrective actions must be documented and maintained for five (5) years. The ALPHA President (or designee) will participate in the Owner Client investigation. ALPHA Management may request a separate internal investigation to supplement the owner client's investigation.

All ALPHA employees will be trained in the requirements of PSM during their initial training and in the Owner Clients Management of Change Process, Safe Work Practices, and Emergency Response Plans, as appropriate.

21. RIGGING – OFFSHORE

21.1 Purpose

The purpose of this Procedure is to ensure a safe and incident free lifting operation in the offshore environment.

21.2 References

American Petroleum Institute’s Recommended Practice 2D (API RP-2D) 5th Edition

21.3 Definitions

Outer Continental Shelf – means all submerged lands lying seaward and outside of the area of lands beneath navigable waters beginning three (3) miles from the coastline extending outwards and of which the subsoil and seabed appertain to the United States and are subject to its jurisdiction and control.

Qualified Rigger – any person who attaches or detaches lifting equipment that has successfully completed training meeting the requirements set forth by API RP-2D 5th Edition.

Rigging – the art or process of safely attaching a load to a hook by means of adequately rated and properly applied slings and related hardware.

21.4 Responsibilities

ALPHA Company Representatives shall determine if this program is required for regulatory compliance with his/her Owner Client. If this program is deemed necessary, then ALPHA management shall determine which employees are required to receive this training.

ALPHA President (or designee) will select a training facility or an in-house qualified trainer to supply the training along with record retention efforts.

ALPHA employees shall assist his/her supervisor(s) in tracking required training and following safe rigging practices. The employee shall monitor all expiration dates pertaining to his/her required training and notify his/her supervisor in advance of any nearing expiration dates.

Note: Only personnel with training and experience who have completed a rigger training program can attach or detach lifting equipment to loads or lifting loads. **ALPHA personnel DO NOT neither inspect nor operate offshore cranes.**

21.5 Process

21.5.1 General

Only “qualified riggers” are allowed to attach any loads to a lifting hook and only “qualified operators” are allowed to operate a crane while engaged in lifting operations onshore or on the Outer Continental Shelf.

API RP-2D has established a three-tiered classification. Employees will be certified in the applicable classifications as required before starting job assignments requiring rigging and lift operations offshore:

- Qualified rigger
- Qualified inspector
- Qualified operator

Note: ALPHA personnel DO NOT operate offshore cranes!

21.5.2 Material Handling

Rigging equipment shall be inspected to ensure it is safe. Rigging equipment for material handling shall be inspected prior to use and on each shift and as necessary during its use to ensure that equipment is safe.

Defective rigging equipment shall not be used and removed from service.

Rigging equipment shall not be loaded beyond its recommended safe working load and load identification shall be attached to the rigging.

Rigging equipment not in use shall be removed from the immediate work area so as not to present a hazard to employees.

Tag lines shall be used unless their use creates an unsafe condition.

Hooks on overhaul ball assemblies, lower load blocks, or other attachment assemblies shall be a type that can be closed and locked, eliminating the hook throat opening. Alternatively, an alloy anchor type shackle with a bolt, nut and retaining pin may be used.

All employees shall be kept clear of loads about to be lifted and of suspended loads. No employee shall be allowed under a suspended load

21.6 Training

ALPHA employees requiring Rigging – Offshore training shall receive initial and periodic refresher training.

To become a “Qualified Offshore Rigger”, the ALPHA employee shall at a minimum:

- Successfully complete an approved “Rigger” course
 - To successfully complete an approved “API2D Rigger” course, the ALPHA employee must verify that they have gained knowledge through participating in classroom lectures, participating with hands-on training, and then successfully passing a written exam. Once the employee successfully completes the course, a “Rigger” card will be issued to that individual. During the classroom lectures, hands-on training, and written exam the ALPHA employee shall display their competency in the following topics:
 - The selection of proper hardware (eye bolts, shackles, hooks, wire rope products, synthetic slings, chain slings, etc.) for the correct application (weight, hitches, angles, temperatures, center of gravity, etc.)
 - The inspection of the selected hardware before, during, and after the lift
 - Use, selection and maintenance of loose gear (slings, shackles, hooks, etc.)
 - The proper methods of securing the load, attaching the load to the hook, lifting the load, handling of the load during the movement of the load, and lowering and placement of load
 - The proper storage of the rigging equipment

21.7 Record Retention

Documentation of Rigging – Offshore training shall be kept on file.

22. STOP WORK AUTHORITY

22.1 Purpose

The purpose of this procedure is to ensure that all ALPHA employees are given the responsibility and authority to stop work when he/she believes that a situation exists that places them, their coworker(s), contracted personnel, or the public at risk or in danger; could adversely affect the safe operation or cause damage to the facility; or result in an environmental release above regulatory requirements or approvals; and provides a method to resolve the issue. This training will be conducted with all employees prior to initial assignment and refreshed as a reminder periodically. Note: Documentation of this training will be maintained electronically on our website; available for download/printing; and include employee name, date(s) of training, and subject.

This procedure extends the stop work authority to situations where an ALPHA employee believes there is a need to clarify work instructions or propose additional controls. Additionally, no work will resume until all stop work issues and concerns have been adequately addressed.

22.2. References

10 CFR 851 – Worker Safety and Health Program

22.3 Responsibilities

22.3.1 President

President is committed to:

- Assisting employees and management in the resolution of safety issues and concerns
- Immediately contacting management and work to resolve issues when an employee has called a situation to their attention that has not been resolved
- Discussing resolution(s) with employees involved in a work stoppage where resolution was completed after their shift or when they were unavailable, or where he/she acted as their representative in reaching resolution
- Working as the agent of an employee that prefers to remain anonymous to work directly in the resolution of the stop work

22.3.2 Management / Supervision

ALPHA management is committed to promptly resolve issues resulting from an employee-raised Stop Work request. Management (e.g., Company Representative) responsibilities are to:

- Resolve any issues that have resulted in an individual stopping a specific task(s) or activity
- Provide feedback to individual/s and the affected work group who have exercised their Stop Work responsibility on the resolution of their concern prior to resuming work.
 - If the employee that issued a stop work is not available due to reasons such as vacation, shift change, training, etc., then management will provide feedback to the appropriate personnel prior to resuming work.
- Ensure no actions are taken as reprisal or retribution against ALPHA employees who raise safety concerns or stop an activity they believe is unsafe.

22.3.3 Employees

In support of the safe execution of all work activities, all ALPHA employees have the following responsibilities and authorities to:

- Stop work or decline to perform an assigned task without fear of reprisal
- Discuss and resolve work and safety concerns
 - The Stop Work may include discussions with co-workers, supervision, or safety representative(s) to resolve work related issues, address potential unsafe conditions, clarify work instructions, propose additional controls, etc.
- Initiate a Stop Work IMMEDIATELY, without fear of reprisal, when the employee believes a situation exists which places himself/herself, a coworker(s), or the environment in danger or at risk
- Report any activity or condition the employee believes is unsafe or for which they have initiated a Stop Work
 - Notification should be made to the affected worker(s) and to the supervisor or their supervisor's designee at the location where the activity or condition exists
 - Notify their supervisor if a raised Stop Work issue has not been resolved to their satisfaction through established channels prior to the resumption of work
 - All Stop Work incidents shall be documented for lessons learned and corrective measures to be put into place

23. WASTE MANAGEMENT

23.1 Purpose

This procedure identifies ALPHA administrative and procedural requirements for waste management activities. All ALPHA employees will be trained in waste minimization procedures, environmental requirements, and Owner Client site specific Waste Programs, as appropriate.

23.2 Definitions

Aboveground Storage Tank (AST) – A vessel intended for extended-duration storage that is placed above the surface or ground.

Characterization of Wastes – Obtaining information about the chemical and/or physical characteristics of waste. Chemical analysis of every stream does not need to be performed, although it may be required in some cases.

Containment Storage Area – An area with an impermeable surface and secondary containment.

Contaminant – Any element or compound that contaminates a matrix or medium (causes it to be impure).

Impermeable Surface – A surface that is impenetrable by liquids including solvents and corrosive materials. Examples of impenetrable surfaces include concrete, asphalt, and fiberglass. An impermeable surface should not contain expansion joints, visible cracks or holes, or other gaps that would allow liquids to escape.

Material Safety Data Sheet (MSDS) – Includes information concerning chemical hazards, safe handling, storage and disposal.

Non-Regulated Waste – Any waste that is not regulated by the local, regional, or country agencies. These wastes generally have few, if any, management or disposal requirements. However, they must be managed and disposed of in accordance with sound environmental and safety practices.

Office/Plant Trash – A common waste stream generally composed of paper, paper products (cardboard), wood, plastic, food products, cloth, and small pieces of metal. This waste stream generally does not contain process wastes.

Recycled Material – Any byproduct, material, or piece of equipment which is no longer useful for its intended purpose but is used again after reclaiming or reprocessing. Recycled materials are not considered waste.

Regulated Waste – Any waste that is regulated by any government agency. These wastes require management and disposal in accordance with local, regional and/or country requirements.

Secondary Containment – A means of collecting or holding liquids around a tank or in a storage area. Secondary containment should have a holding volume of at least 110% of the largest container in the storage area.

Toxic – Of, relating to, or caused by a toxin or poison. Toxins are substances that cause either permanent or reversible injury to the health of a living thing on contact or absorption. A poison is a substance that causes injury, illness or death of a living organism.

Treatment plant – A plant, facility, or unit to which wastewater is discharged or transferred for the purpose of removing contaminants.

Underground Storage Tank (UST) – A vessel intended for extended-duration storage that is placed below the surface or ground.

Vapor Pressure – The pressure exerted by a volatile liquid, generally measured in psia (pounds per square inch absolute).

Waste – Any material, product, or piece of equipment that has served its useful purpose and is to be disposed of.

Waste Stream – A class or type of waste that is comprised of like waste or wastes that is compatible and requires similar on-site management or disposal.

23.3 Responsibilities

ALPHA President (or designee) shall:

- Assist in obtaining permits, exemptions, authorizations, or registrations for waste disposal from ALPHA facilities
- Advise or assist in waste management and waste minimization activities as needed
- Assist in the training of ALPHA employees on the requirements of the waste management and waste minimization programs and/or procedures

ALPHA employees shall follow all policies/procedures pertaining to waste management and minimization.

23.4 Process

23.4.1 General Requirements

Waste management and disposal is regulated in most nations and these requirements vary greatly – not only from country to country, but also within regions of countries. It is usually possible to obtain a permit or authorization to dispose of waste off-site. ALPHA has the responsibility of determining and acquiring any permits or authorizations that are required for waste disposal. ALPHA is also responsible for determining and following waste management requirements while the waste is on-site.

23.4.2 Waste Management

Common examples of waste generated at ALPHA locations include office trash and used equipment. On-site management of these wastes will vary greatly and in some cases segregation of waste streams will be required.

Each stream should be characterized by obtaining information with respect to the chemical and physical characteristics of the waste. Chemical analysis of every stream does not usually need to be performed, but it may be required in some cases. Knowledge of the properties of the waste may be sufficient for characterization purposes.

Once the waste stream is characterized, it can be managed. In most cases, minimizing the number of waste streams generated by ALPHA is preferred. Combining like wastes into the same stream will reduce waste management activities and simplify disposal. However, make sure that combining wastes does not violate any local, regional, or country requirements. Also, in areas where there are different classes of waste (the United States, Canada, and Europe have hazardous and non-hazardous classifications) the requirement to segregate the classes may prevent combining of waste streams.

23.4.3 Storage Containers

There are many types of storage containers for waste including tanks, drums, pails, bags, boxes, and pressurized cylinders. All waste containers must meet the following general requirements:

- The container must be compatible with the waste
- The container must be in good condition
- The container must be marked in accordance with local, regional, and country requirements

If any waste container is discovered to be damaged it must be taken out of service immediately.

23.4.3.1 Drums

Drum storage of waste is preferred over tank storage, when possible. All drums should be stored in an area with an impermeable surface and secondary containment. Drums should remain closed at all times, except when transferring materials into or out of them. Drums should not be stacked over three high and there should be adequate aisle space between drums to allow for inspection and leak detection.

23.4.3.1 Pails, Boxes, and Other Miscellaneous Containers

All pails, boxes, bags or other miscellaneous containers should be closed at all times, except when transferring materials into the container. Also, if the container holds liquids, they should be stored in an area with an impermeable surface and secondary containment. All containers, no matter how small, should be clearly labeled. Multiple small containers inside a larger container (many small bags contained in a box) do not have to be individually labeled as long as the smaller containers remain in the larger container.

23.5 Waste Storage

ALPHA's waste storage requirements include:

- All containers must be compatible with the waste material stored in them and must remain closed when not in use
- Specific areas should be designated and cordoned off exclusively for waste storage
- If outside and unprotected from storm water contact, the waste storage area should be bermed
- No storm drain or conduit to storm drainage should be within (inside) a berm of a waste storage area
- Moreover, in an un-bermed waste storage area, no drains should be directly exposed to runoff from waste storage areas
- Smoking should not be allowed within 50 feet (15 meters) of waste storage areas with appropriate warning signs posted
- Spills, even minor ones, must be cleaned up promptly

23.6 Waste Disposal

Containers used for waste shipment must be labeled according to local, regional, or country regulations. All containers must be suitable for the purpose--for instance, corrosive wastes must be stored in plastic or lined containers. Waste containers must be stored away from heat or ignition sources. Areas where waste is stored awaiting disposal must be designated and labeled as such.

All wastes must be disposed of through a licensed contractor. Transferring wastes between facilities is not advised. Instead, a licensed disposal agent should be contracted to make the various collections and then consolidate the waste shipment.

The licensed disposal agent must be notified of the quantities and chemicals involved when arrangements are made for waste removal. Any special hazards or conditions should also be noted. ALPHA management should be consulted before disposing of any hazardous waste. ALPHA President (or designee) may also be consulted regarding the storage, disposal, packaging, documentation, and removal of waste.

23.7 Waste Minimization

Waste minimization is important because, in addition to preserving the environment for others, it helps create a positive company image and lets us feel proud to be a part of ALPHA.

Waste minimization can take on many forms including good housekeeping, limiting inventories of chemicals, and recycling or reuse of materials that would otherwise be considered waste and disposed of.

Tracking waste generation and periodically assessing the type and amounts of wastes is an important start in targeting possible waste minimization projects. By identifying the large-

volume waste streams, minimization procedures can be developed and the feasibility of implementing the procedures can be assessed.

23.8 Training

ALPHA employees shall receive awareness training for guidance on proper waste management practices and waste disposal of universal and hazardous waste.

23.9 Record Retention

Permits, exemptions, authorizations, or notifications of waste management and/or disposal, as well as any correspondence with local, regional, or country agencies, must be kept on file at each location.

Some government agencies require very specific recordkeeping with respect to waste generation and disposal (for example, U.K. duty of care, U.S. hazardous waste manifest). Regardless of these government requirements, ALPHA should keep track of waste generation and disposal for waste minimization assessments. This may be as simple as an accounting record of shipped waste that designates volume; type and destination of the waste; or it may be a more complex system of specific waste manifests, transportation logs, certification of disposal/destruction, etc.

For assistance in determining the recordkeeping and reporting requirements, Company Representatives and employees may contact the ALPHA President (or designee).

Records of employee universal and hazardous waste awareness training will be maintained.

24. WELL CONTROL – SUBPART O

24.1 Introduction

Pursuant to the Minerals Management Service (MMS) final rule 30 CFR 250, “Subpart O - Well Control and Production Safety Training” effective October 13, 2000, ALPHA has established and implemented the program contained herein.

ALPHA has no company employees conducting well control or production safety work in the OCS. Should ALPHA decide to use employees to perform these duties, this document will be revised to include additional aspects of the Subpart O regulation.

This plan addresses each of the following training issues:

- Procedures for evaluating the training plans and programs of contractors
- Procedures for verifying that contract personnel engaged in well control or production safety operations understand and can properly perform their assigned duties

- Procedures for verifying that contractor training programs provide for periodic verification of knowledge and skill verification
- Audit procedures
- Recordkeeping and documentation procedures

24.2 References

30 CFR 250, “Subpart O - Well Control and Production Safety Training”

24.3 Task Performance

Tasks ALPHA performs are not directly related to drilling, well completion, well work-over, snubbing, coil tubing, wire-line operations, casing work, or welding, but do include consultant services for oilfield operations or other as required tasks as specified by the Owner Client. Therefore, ALPHA shall perform this work which must only be done by or under the supervision of an employee who has well control training.

24.4 Training Plan

Plan Objectives – The objectives of this training plan are:

- To ensure safe, clean, and incident free operations in the Outer Continental Shelf
- To ensure that ALPHA employees are trained and competent in regard to production safety system operations and to understand and can properly perform their assigned duties

Applicability – The Subpart “O” regulations address both well control and production safety systems training requirements.

Job Titles – Since ALPHA does not currently have any employees who perform or have the potential to perform tasks directly related to drilling, well completion, well work-over, snubbing, coil tubing, and/or wire-line operations, this plan will pertain only to future Production Safety Systems training.

24.5 Employee Training Responsibilities

ALPHA will establish a training plan using approved training providers, so that all ALPHA “Production Systems” employees are evaluated for proficiency and/or trained to proficiently perform their assigned production safety duties.

The objective is to ensure that all employees involved with production safety systems in the performance of their duties maintain and enhance their job skills while staying current with the latest technological advancements.

The company accepts prior forms of training documented by the old MMS guidelines as certificates of competency until the expiration of the current valid certificate.

This plan has been developed to ensure that all future ALPHA employees engaged in production safety operations understand and can properly perform their duties. Employees will complete proficiency requirements only for those duty levels for which they are specifically assigned.

The Production Safety Systems Training program will have provisions for all employees involved with the installation, repair, testing, maintenance, or operations of surface and/or subsurface safety devices. Depending on the level and job description of ALPHA employees and their assigned duties, the proper program or combination of programs will be used.

24.6 Production Safety Practices Procedures

Prior to being assigned to perform duties covered under this plan, ALPHA production safety systems employees will successfully complete a comprehensive production safety system course that enables them to install, test, maintain, and/or operate safety devices.

The content of training shall meet the minimum course curriculum requirements of the company-training providers approved under this plan. ALPHA will augment this training with internal and/or vendor-training programs to ensure employee skills are challenged with the latest in technological advancements.

Prior to engaging in any designated activity in the OCS, ALPHA employees must verify training and job task assessment for proficiency in performing Production Safety System operations in accordance with this training plan.

At least every three (3) years, ALPHA management will notify ALPHA production safety system employees that they are required to successfully complete a PSST course.

24.7 Contractor Evaluation Process

ALPHA, or an authorized representative, evaluates the training plans and programs of its contractors by doing the following:

- a. Evaluating the contractor's training plan
 - a. After obtaining a copy of the contractor's training plan, ALPHA:
 - i. Asks contractors to complete the Contractor Self-Evaluation Form (Attachment B) and then reviews it for completeness and compatibility with the contractor's plan/program
 - ii. Identifies any discrepancies between the contractor's plan and the self-evaluation form and resolves those differences with the contractor's representative, and

- iii. Documents acceptance of the contractor's training plan/program by completing the Subpart O Training Evaluation of Contractor Plan checklist (Attachment A).
2. Reviewing the training records of contractor personnel to verify that contract employees can perform assigned duties (per §250.1503(b)(3)), and
 - a. ALPHA considers a valid (i.e. non-expired) training certificate to be evidence of successful completion of an accepted training program and proof of ability to perform assigned duties. Specific criteria, including the minimum score needed, for successful completion of an accepted training program will vary from course to course.
 - i. Contract employees who have not yet been certified may not work unsupervised on an ALPHA property.
 - b. ALPHA will ensure that contractor employees have been appropriately trained and can therefore perform assigned duties by reviewing either training rosters that include certification dates, certificates, or wallet cards.
3. Evaluating the contractor's training program.
 - a. Contractor Program Evaluations, conducted as part of the internal audit process (i.e. at least once every four years), are done by visiting the contractor's office and reviewing records to ensure that the contractor is following its training plan (typically accomplished through the use of a customized program evaluation questionnaire).
 - i. The contractor offices and operating locations may be required to provide the following documents for use during a Contractor Program Evaluation:
 1. A copy of the contractor's training plan or training philosophy
 2. Proof of training, which may include official certificates, training completion rosters or lists, electronic documentation, and/or certification cards
 3. Company training policies
 - b. During the program evaluation, ALPHA will verify that the contractor's training program provides for periodic verification of knowledge and skill retention (per §250.1506(c)) by:
 - i. Reviewing the completed Contractor Self-Evaluation Form (Attachment B) where the contractor has stated the method used to verify knowledge and skill retention, and
 - ii. Reviewing a random sample of the documentation in order to ensure that the contractor is verifying the knowledge and skill retention of its employees in the stated method.
 1. In cases where a contractor program evaluation has not yet been conducted, ALPHA will request that the contractor submit a sample of the documentation used to verify knowledge and skill retention.

24.8 Internal Audit Process

This section describes the Walter Subpart O training program internal audit process.

24.8.1 Frequency

An ALPHA Subpart O Training Program Internal Audit will occur at least once every four years.

24.8.2 Internal Audit Procedures

The adequacy of ALPHA's Subpart O Training Program will be audited by:

1. Reviewing the ALPHA Subpart O Training Plan and comparing it to the current MMS rule
 - a. The review is conducted using the Compliance Questionnaire found in the Subpart O Guidance Document published by MMS
2. Reviewing ALPHA's drilling and production activity for the review period
3. Identifying the contractors used during the review period
4. Reviewing the evaluation and verification records for completeness. This includes:
 - a. Copies of contractors' plans
 - b. Evaluations of the contractors' plans
 - c. Contract personnel rosters for the activity that occurred during the review period
 - d. Evaluations of the contractors' programs

24.8.3 Audit Report and Resolution

A report of findings from the internal audit will be presented to ALPHA management within 30 days of the audit's completion. If necessary, a copy of pertinent sections of the report will be sent to operating location management for follow-up and resolution of issues. Copies of internal audit documentation will become part of ALPHA's Subpart O records.

24.9 Record Retention

ALPHA will retain documents of the following:

- Contractor training plans
- Contractor plan evaluations
- Contractor program evaluations
- Sample contractor employee verifications of ability to perform assigned duties
- Internal Audit reports

Records will be kept for a minimum of five years or as necessary for each contractor.

For ALPHA employees covered under this plan, records shall be maintained, documenting the employee's name, current position, years of experience in their respective current position, and years of total oilfield experience.

A Production Safety System Instructor, who may or may not be an employee of ALPHA, shall administer Production Safety Systems Training. PSST records shall be forwarded to ALPHA for retention purposes. These records shall include:

- All Production Safety Systems Training records, certification, and documentation
- Written examinations and hands on assessments
- Class evaluations
- Records of employee interviews
- Records of in progress class audits

The records will be maintained for a period of five years.

Upon successful completion of the PSST training, each ALPHA employee shall be given a certificate verifying satisfactory completion of the training.

24.10 Meeting Owner Client and MMS Requirements

Should the Owner Client conduct an audit at our office, ALPHA is prepared to explain the overall training program and produce supporting evidence.

Copies of the ALPHA training plan for employees engaged in production safety operations will be maintained at the corporate office and field locations where the employees are assigned. This plan will be a combination of hard (printed) copy and electronically stored data. This plan can be submitted to the Owner Client upon their request.

Upon request of the Owner Client, ALPHA will provide copies of training documentation for employees involved with Production Safety Operations during the past 5 years or the time period the employee has been currently employed by the company.

Upon request, ALPHA will make employees available to the Owner Client and MMS, or its authorized representative, to conduct interviews at either onshore or offshore locations to inquire about the types of training that were provided, when and where this training was conducted, and how effective was the training.

Upon request, ALPHA will make employees available to the Owner Client and MMS, or its authorized representative, to conduct testing at either onshore or offshore locations for the purpose of evaluating an individual's knowledge and skills in performing production safety duties.

24.11 Compliance Coordination

Since programs may vary significantly from operator to operator, ALPHA has established a system to identify and comply with the requirements of its customers through the use of two evaluation forms:

- Subpart O Training Evaluation of Contractor Plan
- Subpart O Contractor Self-Evaluation

Through the completion of these two evaluation forms, ALPHA, other operators, and our customers will be assured of compliance, understanding, and agreement as to the standards set forth in Subpart O.

24.11.1 Attachment A

Subpart O Training Evaluation of Contractor Plan

Contractor _____

The following table identifies the items reviewed and the findings:

Question	Answer (Yes or No)	Details
Does the contractor have a Subpart O plan or training philosophy?		
Does ALPHA have a copy of the contractor's plan?		
Does the contractor randomly test for employee competency?		
Does the contractor's plan specify a time frame for personnel retraining?		
Does the contractor maintain all records for a minimum of 5 years?		
Does the contractor specify internal audit procedures in its plan?		
Does the contractor meet our requirements for training?		
Do the contractor's training sources meet the criteria set forth in the contractor's Subpart O plan?		
If Yes, Criteria:		
Does the contractor meet our requirements for training?		

School Name		
School Name		
Is any further action required for the contractor to meet the client's requirements?		

Signed _____ Date _____

24.11.2 Attachment B

Subpart O Contractor Self-Evaluation

Contractor Information		
Contractor Name:		
Address:		
Telephone Number:		
Fax Number		
Training POC:		
Company Specialty/Trade		
Do you require formal (written) training for the following employees?		
Employee Type	Yes – No – N/A	Frequency
Field Supervisors		
Employees		
Training Programs and Policies		
Do you have a formal (written) training plan?		If yes, please provide a copy of your written plan or manual.
If you do not have a written training plan, do you have a formal (written) training policy?		If yes, please provide a copy of the policy.
Do you conduct internal training audits?		Frequency
Does your company require IADC WellCAP certification for well control employees?		Frequency
Does your company require Production Safety (T-2) training through API-approved training courses?		Frequency

Does your company require periodic verification of well control or production safety knowledge & skills (apart from the formal classroom training)? (Please attach an example)		Frequency: Written Assessment ____ Test ____ Other _____
Where are your employee training records maintained? In what format?		
Please explain how employee training is administered and documented.		
Please list the names of personnel who are responsible for employee training.		
Please list the schools that conduct Production Safety and/or Well Control training for your employees.		
Contractor Verification		
Name:	Title:	
Signature:	Date:	
For ALPHA Internal Use Only		
Approved: Yes ____ No ____ (If your organization does not meet the required training criteria, we will invite you to explain why, and allow your company to take steps to improve your training program. Training consultants are available to analyze your training program and make recommendations for improvement.)	Explanation: 	
ALPHA Evaluator:	Title:	
Signature:	Date:	

25. SAFETY TRAINING

25.1 Purpose

The purpose of this Procedure is to define the requirements for the education and training of personnel in the recognition of work hazards and the methods used to control or eliminate those hazards.

25.2 References

OSHA 2254: Training Requirements in OSHA Standards and Training Guidelines

API RP 75 (R2008): Safety and Environmental Management Program for Offshore Operations and Facilities

25.3 Definitions

Awareness Training – General training to inform employees of hazards that may be encountered in the workplace. Awareness training provides general protection guidance, but is not designed as a facility-specific education module.

In-Depth Training – Extensive training that is specific to a topic or hazard that requires more than generalized information. In-Depth training will be provided for facility hazards that can be considered immediately dangerous to life and health (IDLH).

Refresher Training – Training designed as an overview or update to specific topics of training. Refresher training is generally shorter in length covers the topics on a more general level.

25.4 Responsibilities

The President (or designee) will develop a basic annual training schedule.

25.5 Process

Training shall be conducted in accordance with the requirements of this procedure and applicable Federal, State, Local, and Owner Client requirements.

25.5.1 Training Plan

The Company Representative and President (or designee) shall prepare a training plan based upon the following checklist:

- Identify training needs

- Review of Federal, State, Local, Client, and Company requirements for training programs
- Consult Material Safety Data Sheet's (MSDS) for materials used on the project
- Review indicators of training needs: lack of knowledge, unfamiliarity with equipment, and careless or incorrect project performance
- Review Owner Client Safe Work Procedures
- Determine whether there are other Company training programs that contain the same types of training
- Identify who needs each type of training
- Identify the best format/delivery mode for the training
- Scheduling of the training
- Decide who is to conduct the training
- Verify the skills and knowledge in the subject matter if the training is to be conducted by in-house personnel
- Confirm the credentials in the subject matter for consultants who will conduct training
- Establish a formal outline for the training
- Establish a method of measuring the effectiveness of the training
- Plan how to institute improvements in the training
- Documentation of training

25.5.2 Training Matrix

The following training matrix (located on our website) will provide basic guidelines establishing: minimal training requirements upon start of employment; who should attend; approximate course length; and duration before refresher training is necessary:

Description	Synopsis	Attendees	Course Length (Approximate)	Duration
*Access to Medical Records	Provide access to information concerning exposure to toxic substances or harmful physical agents	Employees who will be exposed to toxic substances or harmful physical agents	30 minutes	1 Year
*Accident Prevention Signs & Tags	Provides information about the design, application, and use of signs or symbols intended to indicate and define specific	All employees	15 minutes	Prior to or at the time of initial assignment to areas where accident prevention signs and tags are used

	hazards in the workplace			
*Benzene Safety	Provides instruction on where benzene is found, exposure limits, how one can become exposed, and how to properly protect oneself	Employees who may be exposed to Benzene	30 minutes	1 Year
*Bloodborne Pathogens	Describes types of bloodborne transmissions that can be contracted in workplace and how to protect yourself from transmission	Employees with emergency response duties and/or potential for exposure	30 minutes	2 years
Confined Space	Provides information concerning confined space recognition and their potential hazards	Employees working in confined spaces and their supervisors	30 minutes	1 Year
*Crane Operator – Offshore	Provides information on crane operator responsibilities & requirements for offshore operations	All employees involved with offshore crane operation activities	30 minutes	Prior to or at the time of initial assignment to areas where offshore crane operation activity is involved
DOT Drug & Alcohol – Supervisor	Provides information on the federal DOT and state requirements for drug and alcohol training	Supervisors & Managers of CDL drivers	2 hours	Non-expiring
*Drug & Alcohol Awareness	Provide information on ALPHA policy and issues related to drug and alcohol abuse	All employees	15 minutes	5 Years
*Electrical Safety & GFCI (Non-Electrical Worker)	Describes safe use of electrical equipment and personnel approved to perform electrical work	All employees	30 minutes	3 Years

*Emergency Action & Fire Prevention	Provide information on hazards that lead to an emergency; evacuation; and protection, response, and prevention of fires & spills	All employees	30 minutes	1 Year
Fall Protection	Provides requirements for employees working or walking on elevated surfaces	Employees working on elevated surfaces and their supervisors	30 minutes – “Awareness” Level 4 hours – “Qualification” Level	Non-expiring; unless changes and/or corrections are necessary
First Aid / CPR / AED	Provides instruction on skills needed to respond to & manage a first aid, choking or sudden cardiac arrest	Employees with emergency response duties	6 hours	2 years
*H ₂ S Safety	Provides instruction on where H ₂ S is found, exposure limits, how one can become exposed, and how to properly protect oneself	Employees who may be exposed to H ₂ S	30 minutes	1 Year
*Hand Safety	Provides safety information concerning hands coming into contact with other materials	All employees	30 minutes	Non-expiring
*Hazard Communication	Provides information for anyone who uses, handles, or stores chemicals	All employees	30 minutes	1 Year
Hearing Conversation	Explain the effects of noise on hearing and the purpose of hearing protection	Employees who are exposed to high noise (>85 decibels)	30 minutes	1 Year
*Incident Management	Provides training in incident investigation, notification, and reporting requirements	Employees - Managers	30 minutes - 1 hour	3 Years - 1 Year

*Intervention and Behavioral Safety	Provides information on preventing behavioral crises and intervening without restraint	All employees	1 hour	2 Years
*Ladder/Scaffold Safety	Provides information or proper use and basic inspection of ladders/scaffolds	All employees who use ladders/scaffolds	30 minutes	Non-expiring; unless changes and/or corrections are necessary
*Lifting & Back Safety	Provides information or proper manual lifting techniques	All employees	1 hour	3 Years
*Lockout/Tagout – Affected Employee	Provides information on working safely around equipment and machinery that encounter lockout/tagout procedures	Employees who normally work on or near a machine that must be locked out for maintenance	30 minutes	1 Year
Lockout/Tagout – Authorized Employee	Provides information on performing the responsibilities of an "authorized" person	Employees who are qualified to lock out machinery and perform maintenance	45 minutes	1 Year
*Marine Debris	Describes safe practices for avoiding accidental loss of solid waste items in the marine environment	Employees who travel or work offshore	15 minutes	1 Year
*Offshore Orientation & Evacuation	Describes safe practices while traveling and working offshore	Employees who travel offshore via boat or work offshore	30 minutes	Varies upon Owner Client/SafeGulf requirement for re-cert training
Offshore Water Survival & HUET	Prepares students to avoid in-the-water incidents, while educating them to minimize injuries and help survive in the event of a water evacuation	Employees required by Owner Client(s)	6 hours	4 Years

*Personal Protective Equipment	Provides general information concerning the proper selection and use of PPE in hazardous situations	All Employees	45 minutes	Non-expiring; unless changes and/or corrections are necessary
Personnel Transfer Basket & Swing Rope Training	Provides information and training on transferring to and from vessels	Employees who travel offshore via boat or work offshore	1 hour	4 Years
*PSM - Contractor Awareness	Review of information from the ALPHA HSE MS Manual	All Employees	15 minutes	Non-expiring; unless changes and/or corrections are necessary
Respiratory Protection	Gives an overview of respiratory hazards; various respirator types used; and defines the proper respirator selection, maintenance, and storage requirements	Employees who are exposed to hazardous air contaminants, which meet or exceed the established exposure levels (e.g., PELs, TLVs, etc.) and required to wear respiratory protection	30 minutes	1 Year
*Rigging Offshore	Provides information on proper rigging techniques/requirements and safe work practices	All employees involved with rigging offshore activities	30 minutes	Prior to or at the time of initial assignment to areas where offshore rigging activity is involved
*Safe Work Permit System	Provides information to assist those involved with hazardous jobs to identify and control job/site-specific risks by assessing conditions, hazards, and procedures	Employees who use safe work permits	20 minutes	3 Years
SafeGulf	Provides information required for working on operator premises in the Gulf of Mexico	Employees required by Owner Client(s)	8 hours	Varies upon Owner Client/SafeGulf requirement for recert training

SafeLand	Provides information on the minimum requirements for the US Onshore E&P Industry	Employees required by Owner Client(s)	4 hours	Varies upon Owner Client/SafeGulf requirement for re-cert training
*Walking & Working Surfaces	Provides requirements for employees working 6 feet or more above the ground	Employees working 6 feet or more above the ground and their supervisors	30 minutes	Non-expiring; unless changes and/or corrections are necessary
*Welding, Cutting, & Hot Work	Provides general information concerning safe practices and PPE during these types of operations	All employees involved with welding, cutting, & hot work activities	30 minutes	Prior to or at the time of initial assignment to areas where welding, cutting, and/or hot work activity is involved
*Well Control / Subpart O	Review of information from the ALPHA HSE MS Manual	All employees who work/go offshore	30 minutes	2 Years
*Workplace Violence Prevention (WPV)	Provides guidance on understanding warning signs of WPV and measures to prevent incidents of violence or harassment	All employees	30 minutes	3 years
*Awareness Level-type Training				

25.5.3 Orientation

Each person, upon assignment to a Project, shall attend a site specific orientation conducted by the Company Representative prior to the commencement of work.

The orientation shall include, but not limited to:

- ALPHA Environment, Health, & Safety Policy and Procedures
- Owner Client and project specific requirements
- Work area hazard assessments
- Employee handbook
- Safe work practices
- Reporting unsafe acts and conditions
- Fall prevention procedures
- Scaffolds, ladders, and work platforms

- Barricades and perimeter guards
- Housekeeping
- Fire protection and prevention
- Work permit system
- Control of hazardous energy sources (lock-out/tag-out)
- Emergency procedures
- Material storage and handling
- Electrical safety
- Minimum dress requirements
- Personal protective equipment (PPE)
- Reporting near-misses and accidents
- First aid services and facilities
- Bloodborne pathogens awareness

25.5.4 Monthly HSE Message

At a minimum, a monthly safety message shall be sent via e-mail to all employees by the President (or designee).

The material covered shall be relevant to the health and safety of ALPHA employees both on- and off-the job.

The safety message may also be used to review recent incidents and refresh employee training on health and safety issues.

25.5.5 Monthly Safety Meeting

A monthly safety meeting should be held at a time and place specified for each project and the main office. A written report detailing attendees and topic(s) will be completed and submitted to the President (or designee).

Note: A blank *ALPHA Safety Meeting Report* is located on our website and is available for download and use.

The material covered shall be relevant, which may include a review of recent incidents, refresher of employee training on pertinent health, safety, and environmental issues, etc., which employees must be able to hear/see during the presentation.

The meeting shall provide the opportunity for employees to ask questions, make suggestions, and voice safety concerns.

25.5.6 Training Assessment

All training should include an assessment, e.g., verbal Q&A, written Q&A, hands-on practical, etc., to verify that the participants have achieved a satisfactory level of understanding. Deficiencies will be corrected and re-assessed prior to employee receiving credit for completing the training. A record of the training, assessment, and re-assessment (if required) will be documented.

25.6 Record Retention

The President (or designee) will maintain records of HSE training, New Employee orientations, and safety meetings in the Training Files.

Company Representative(s) will maintain all site specific orientations, safety meetings, and all job specific training at the worksite for the duration of the project. At the end of the project, all training records will be sent to the HR Department.

26. BEHAVIORAL BASED SAFETY

26.1 Purpose

The ALPHA Behavior Based Safety (BBS) initiative is an education and observation process used to improve safety and reduce risk in the workplace. This process uses a proactive approach and is intended to communicate to employees the elements and the procedures of BBS that will assist in reducing at risk behaviors which in turn reduces injuries in our workplaces.

26.2 Scope

This program applies to all ALPHA employees at Owner Client worksites and at all ALPHA facilities. Employees are encouraged to actively participate in BBS process and follow the process guidelines.

26.3 Requirements

Safety awareness principles are the foundation of the BBS process. The key concepts teach employees to recognize when they may be in one of the following states:

- Rushing
- Frustration
- Fatigue
- Complacency
- Eyes not on task
- Mind not on task

- Line of fire
- Loss of balance/traction/grip

26.4 Process

26.4.1 Pre-task Analysis

The process used to evaluate the work environment is accomplished by performing a Job Safety Analysis (JSA) of each job. The purpose of which is to eliminate or control all hazards that may be encountered to complete the job. This process is included in the BBS process to establish the correct habits and work procedures in order to reduce at-risk behaviors.

26.4.2 Observation Process

Observation Process is designed to raise safety awareness and provide a feedback mechanism for management to make changes in design, process or procedure in order to reduce at-risk behaviors. The key to this process is raising awareness of behavior through observation and feedback. The process has four key elements:

26.4.3 Observation and Feedback

Observation and Feedback is the process that starts the observation of workers, fellow employees, other contractor employees, and customer employees as they perform their tasks. Observers collect information about worker performance and provide feedback via the observation card. The emphasis is not on who was observed but rather what behavior was observed. Observations provide direct, measurable information on employee work practices identifying both safe and unsafe behaviors. During the observation the observer records their findings on the BBS Observation Form.

Items to be observed include but are not limited to:

- Personal Protective Equipment
- Procedures / Methods
- People
- Work Environment
- Equipment

After the observation is made the observer will review the observation with the observed employee the following:

- Start with positive comments
- Reinforce safe behaviors observed first
- Describe and discuss what was unsafe

- Solicit from observed employee explanation of his/her unsafe behavior with open-ended questions
- Re-emphasize no consequence to observed employee

Documenting feedback allows workers to assess what should be repeated and what should change to reduce risks in the workplace.

26.4.4 Data Management

BBS Observation Forms are forwarded to the ALPHA President (or designee). Reports are generated and forwarded to ALPHA management and employees, as appropriate. The ALPHA President (or designee) will compare measurements and track results by an acceptable method so a continual trend analysis and statistical comparison of employee safety behavior can be made over time.

26.4.5 Analysis and Action Planning

Once trend analysis is complete, appropriate action plans are developed by the ALPHA President (or designee) to address unsafe behaviors. Action planning will include:

- Evaluating unsafe behaviors from trend analysis and prioritize
- Developing an action plan for unsafe behaviors based on comments and feedback from observations
- Designating responsible parties and timeframes within the action plan
- Defining who is responsible for action planning
- Ensuring management support

26.4.6 Action Plan Follow Up

All action plans shall be arranged by a set time period. To ensure effectiveness of the BBS follow-up is necessary to ensure the closure of all actions listed. The follow-up process will include:

- Monthly frequency for review of action by the President (or designee), Company Representative(s), and employees
- Assign accountability for closeout of action plans
- Document archiving of action plans with completed action items
- Responsibilities

26.5 Training

Employees shall be trained on BBS and the observation process. The training program shall:

- Generalize employee awareness as related to how decisions effect behavior and the impact those decisions have on working safely
- Be conducted using classroom and field settings

Types of training shall include:

- Management training
- New employee training
- Refresher (annual) training for all participants

Training elements will include:

- Program objectives and incident statistics reviewed
- How to conduct the observation
- How to complete the observation form
- What do the behaviors mean
- Feedback training and role play (mentoring and coaching)
- Employees should be aware they may be requested to be observed at any time
- Documentation training

26.6 BBS Safety Observation Form

Note: A blank *BBS Safety Observation Form* is located on our website and is available for download and use.

Your concerns for safety and suggestions as how to improve our safety program are important. Use this form to submit either safety improvement input and/or a BBS safety observation. Your name is optional and the name of the person being observed is not to be used... This information will be used to continually improve our safety system and conditions.				
Improvement Input				
<input type="checkbox"/> BBS Observation	<input type="checkbox"/> Unsafe Act	<input type="checkbox"/> Unsafe Condition	<input type="checkbox"/> Recognition	<input type="checkbox"/> Environmental
Employee/Observer Input :				
Employee's Action Taken or Recommendation:				
Supervisor or Management Action Taken:				

Safety Observation S=Safe C=Concern Critical Factors											
PPE / Procedures / Methods			Body Position / Mechanics			Slips / Trips			Equipment / Work Environment		
S	C	Eye & Head	S	C	Proper Position	S	C	Proper Footwear	S	C	MSDS If Needed
S	C	Hand & Body	S	C	Ask for Help	S	C	Aware of Hazards	S	C	Lock Out
S	C	Footwear	S	C	Use Dolly	S	C	Prompt Clean Up	S	C	Tools are Safe
S	C	Trained on Task	S	C	Smaller Loads	S	C	Tripping Hazards	S	C	Adjacent Work
S	C	Work Permit / JSA	S	C	Don't Twist Body	S	C	Not Rushing	S	C	Signage if Needed
S	C	All trained in BBS	S	C	Get Close to Item	S	C	Step Conditions	S	C	Spill Control
Observer's feedback given to other employee:											
Location:				Observer Name:				Date:			
<i>Promptly after observation, give this form to your supervisor who will review it and who must then forward it to the President (or designee) for action.</i>											

27. Benzene Awareness

27.1 Purpose

The purpose of this Procedure is to inform ALPHA employees of the dangers of Benzene.

27.2 References

OSHA 29 CFR §1910.106 Flammable and combustible liquids

27.3 Synonyms

Benzol, benzole, coal naphtha, cyclohexatriene, phene, phenyl hydride, and pyrobenzol. (Note: Benzin, petroleum benzin, and Benzine do not contain Benzene)

27.4 Physical and Chemical Characteristics

Benzene is a clear, colorless liquid with a distinctive sweet odor. Its boiling point is 176 degrees F and its flash point is 12 degrees F. The flammable limits in air are 1.3% for the low end and 7.5% for the high end. Benzene is a flammable liquid. Its vapors can form explosive mixtures. All ignition sources must be controlled when Benzene is used, handled, or stored. Where liquid or vapor may be released, such areas shall be considered as hazardous locations.

Benzene vapors are heavier than air; thus the vapors may travel along the ground and be ignited by open flames or sparks at locations remote from the site at which Benzene is handled. No smoking designated area and fire extinguishers must be readily available.

Benzene is classified as a 1 B flammable liquid for the purpose of conforming to the requirements of 29 CFR 1910.106. A concentration exceeding 3,250 ppm is considered a potential fire explosion hazard. Locations where Benzene may be present in quantities sufficient to produce explosive or ignitable mixtures are considered Class I Group D for the purposes of conforming to the requirements of 29 CFR 1910.309. Health Effects: Benzene is primarily an inhalation hazard. Systemic absorption may

27.5 Exposure and Health Effects

Benzene is primarily an inhalation hazard. Systemic absorption may cause depression of the hematopoietic system, pancytopenia, aplastic anemia, and leukemia. Inhalation of high concentrations can affect central nervous system function. Aspiration of small amounts of liquid Benzene immediately causes pulmonary edema and hemorrhage of pulmonary tissue. There is some absorption through the skin. Absorption may be more rapid in the case of abraded skin, and Benzene may be more readily absorbed if it is present in a mixture or as a contaminant in solvents that are readily absorbed. The defatting action of Benzene may produce primary irritation due to repeated or prolonged contact with the skin. A high concentration is irritating to the eyes and the mucous membranes of the nose, and respiratory tract.

Direct skin contact with Benzene may cause erythema. Repeated or prolonged contact may result in drying, scaling dermatitis, or development of secondary skin infections. In addition, there is Benzene absorption through the skin. Local effects of Benzene vapor or liquid on the eye are slight. Only at very high concentrations is there any smarting sensation in the eye. Inhalation of high concentrations of Benzene may have an initial stimulatory effect on the central nervous system characterized by exhilaration, nervous excitation, and/or giddiness, followed by a period of depression, drowsiness, or fatigue. A sensation of tightness in the chest accompanied by breathlessness may occur and ultimately the victim may lose consciousness. Tremors, convulsions and death may follow from respiratory paralysis or circulatory collapse in a few minutes to several hours following severe exposures.

The detrimental effect on the blood-forming system of prolonged exposure hematopoietic system is the chief target for Benzene's toxic effects that are manifested by alterations in the levels of formed elements in the peripheral blood. These effects have occurred at concentrations of Benzene that may not cause irritation of mucous membranes, or any unpleasant sensory effects. Early signs and symptoms of Benzene morbidity are varied, often not readily noticed and non-specific. Subjective complaints of headache, dizziness, and loss of appetite may precede or follow clinical signs. Rapid pulse and low blood pressure, in addition to a physical appearance of anemia, may accompany a subjective complaint of shortness of breath and excessive tiredness. Bleeding from the nose, gums, or mucous

membranes, and the development of purpuric spots (small bruises) may occur as the condition progresses. Clinical evidence of leukopenia, anemia, and thrombocytopenia, singly or in combination, has been frequently reported among the first signs.

Bone marrow may appear normal, aplastic, or hyperplastic, and may not, in all situations, correlate with peripheral blood forming tissues. Because of variations in the susceptibility to Benzene morbidity, there is no "typical" blood picture. The onset of effects of prolonged Benzene exposure may be delayed for many months or years after the actual exposure has ceased and identification or correlation with Benzene exposure must be sought out in the occupational history.

Locations where benzene exposure can occur:

- Petroleum refining sites
- Tank Gauging (tanks at producing, pipeline & refining operations)
- Field Maintenance

27.6 Regulatory Limits

The permissible exposure limits for Benzene are as follows:

- Airborne – The maximum time-weighted average (TWA) exposure limit is 1 part of Benzene vapor per million parts of air (1 ppm) for an 8-hour workday and the maximum short-term exposure limit (STEL) is 5 ppm for any 15-minute period
- Dermal – Eye and skin contact shall be prevented

27.7 Working Safely with Benzene

Order only the amount needed for your work. Excessive chemicals produce increased risk to the work place.

Benzene should be stored in a vented flammable storage cabinet.

Prior to using Benzene, don proper personal protective equipment, i.e. respiratory, eye and face, boots, gloves and apron protection.

27.8 Emergency Procedures

In a medical emergency: call 911 or on-site responders, if available. All personnel will be aware of the site specific emergency plan.

- Inhalation: If inhaled, move victim to fresh air – If not breathing, give artificial respiration – If having breathing difficulty, provide oxygen

- Skin Contact: In case of skin contact, flush with copious amounts of water for at least 15 minutes and remove contaminated clothing and shoes.
- Eye Contact: If in contact with eyes, flush with large amounts of water for at least 15 minutes – Assure adequate flushing by separating eyelids with fingers
- Ingestion: If swallowed, wash out mouth with water

27.9 Training

Employees shall receive initial and periodic refresher training on Benzene Awareness based on exposure potential.

27.10 Record Retention

Documentation of training in Benzene Awareness shall be kept on file.

28. BLOODBORNE PATHOGENS

28.1 Purpose

This policy shall become part of the ALPHA safety program where we have identified affected employees.

28.2 Policy

Certain business activities may place ALPHA employees at risk to the exposure of bloodborne pathogens. Because of this potential safety hazard for those at-risk positions, employees are required to follow all appropriate safety precautions.

28.3 Program Elements

28.3.1 The Exposure Control Plan

An Exposure Control Plan has been developed and will be reviewed annually to ensure its effectiveness. The objective of the Plan is to eliminate or minimize occupational exposure to bloodborne pathogens and/or infectious diseases. Access to a copy of the exposure control plan shall be provided to all ALPHA employees in a reasonable time, place, and manner.

28.3.2 At-Risk Occupations

The President (or designee) shall maintain a list of identified occupations or tasks having the potential to cause exposure to bloodborne pathogens and a list of which employees perform these jobs.

The following jobs/activities have been identified to have occupational exposure to bloodborne pathogens and/or infectious diseases:

- All Supervisors and First Aid Responders who have received Basic First Aid/CPR Training

Note: These employees will be offered a Hepatitis B vaccination series at no cost. If they decline they must complete a declination form. The form will be maintained at in the office. If they change their minds, they will be allowed to receive the shots.

28.3.3 Employee Responsibility

It is the responsibility of all employees to observe and practice universal precautions when encountering potentially infectious materials. Failure to follow appropriate safety precautions could lead to disciplinary action up to and including dismissal.

28.3.4 Engineering and Work Practice Controls

Engineering and work practice controls shall be developed and implemented to eliminate or minimize employee exposure to bloodborne pathogens. This includes the enforcement of personal hygiene procedures, the use of personal protective equipment (PPE), and restricting access to areas where occupational exposure may exist.

Personal protective equipment (PPE), e.g., gloves, gowns, etc., will be provided at no cost to ALPHA employees. PPE shall be used unless employee(s) temporarily decline to use under rare circumstances. PPE shall also be repaired & replaced as needed to maintain its effectiveness (see Section 23.4.8 for more details).

28.3.5 Facilities and Equipment

All equipment that may become exposed to bloodborne pathogens is to be maintained in a clean and sanitary condition. Within a potentially infectious area, biohazard warning labels and signs shall be appropriately used and fixed.

28.3.6 Hepatitis B Vaccination Program

A Hepatitis B Vaccination program has been established and offered at no charge to employees in positions of risk. Post exposure and follow up program shall be activated when exposure has occurred.

28.3.7 Employee Training

Bloodborne Pathogen awareness training will be provided prior to initial assignment and annually thereafter annually to all employees. Training records will be maintained in the training file for no less than three (3) years.

28.3.8 Procedures

Hepatitis B Vaccination – Employees with duties which create the potential for exposure are required to receive the Hepatitis B and Tetanus vaccine at no charge if assigned to a high risk position. It is recommended that all Supervisors and First Aid Responders be vaccinated, but it is not a requirement.

Disposable Gloves – Employees shall wear disposable gloves when they are or can anticipate handling persons, equipment, or materials contaminated with blood or other body fluids. Disposable gloves shall only be worn once. Gloves should be examined for tears or holes prior to use; immediately discard and replace such gloves.

Hygiene – Employees who come in direct contact with other’s body fluids shall, as soon as possible, cleanse their hands using the antimicrobial hand cleaner, then with warm water and soap for a minimum of 90 seconds, rinsing hands with large amounts of water. (Note: If hand washing facilities are not feasible and/or available, then ALPHA will provide employees with an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes.) In addition, employees shall not eat, drink, or smoke where body fluids or other contagious factors exist.

Potential Exposure – Employees with potential indirect contact should minimize exposure by being aware of indirect methods of possible exposure to infectious disease. For protection, keep at a distance or wear appropriate disposable items. Employees with open cuts or breaks in the skin should cover the wound with a band aid to limit potential exposure to infectious diseases.

Clothing Contamination – If an employee’s clothing gets contaminated with blood or other body fluids, the clothing should be removed as soon as practical and placed in a red disposable biohazard bag for cleaning or disposal as appropriate. Medical/infectious waste, except for sharps (e.g., razor blades, broken glass, needles, etc.) capable of puncturing or cutting must be contained in double, red bags conspicuously labeled with the words “INFECTIOUS WASTE – BIO HAZARD”.

Exercise Caution – Employees should exercise caution when picking up litter, emptying trash or garbage cans to avoid being punctured by sharp items which may be apparent or hidden. Sharp items which are discovered must be properly disposed in a container specifically provided and labeled for sharp objects.

Reports – A Safety Incident Report must be submitted before the end of the work shift by the employee in the event of an occupational exposure to infectious disease or contaminated materials. Failure to report exposure incidents shall subject the employee to disciplinary actions up to and including termination. The reports must contain the name of all first aid providers, a description of circumstances, and determination of whether an exposure incident occurred.

Note: ALPHA COMPLETIONS SERVICES, INC. (ALPHA) will maintain all confidential information as required by law. Accurate records for each employee with occupational exposure shall be maintained for at least the duration of employment, plus 30 years.

29. CONFINED SPACE

29.1 Purpose

The purpose of this Procedure is to establish the minimum requirements for working in confined spaces.

29.2 References

OSHA 29 CFR §1910.146 – Confined Space

29.3 Responsibilities

The President (or designee) will review the Owner Client's Confined Space Program to ensure it meets or exceeds the ALPHA program.

The President (or designee) shall ensure that all employees are trained prior to assignment to a worksite.

The Company Representative shall ensure that all employees are adequately trained in the Owner Client's program as part of their initial offshore safety orientation.

29.4 Process

29.4.1 Confined Space Identification

A survey of the project shall be on-going to identify the confined spaces and to determine the hazards associated with each confined space, i.e., past and present uses, access, mechanical energy sources, pipelines, etc.

A "Danger" Confined Space sign shall be used to identify a confined space and is to remain at the entrance to the confined space.

29.5 Training

Employees shall receive awareness training regarding confined spaces.

Affected employees (entrants, attendant, rescuers, supervisors, monitoring/evaluating personnel, etc.) must be trained in aspects of the written plan that affect them. Training shall be documented. Entrants shall be trained in self-rescue.

Individuals entering Confined Spaces shall be provided with training. This training shall include a general confined space entry class and a specific pre-task review of any hazards identified for that space, a discussion of the work assignment and any control measures necessary for accomplishing the task in a safe manner.

Individuals entering confined spaces that have the potential for a hazardous atmosphere, materials that might engulf an entrant, and a configuration that might trap an entrant or any other recognized hazard shall be provided with formal Confined Space Training. Training shall be developed for Authorized Entrants, Attendants, Entry Supervisors and Rescue/Emergency Service Personnel, and shall meet the requirements of OSHA 29 CFR §1910.146 (g)(i)-(iv) and cover the duties outlined in 1910.146 (h)-(k).

Individuals conducting atmospheric monitoring shall be trained in the proper use and calibration of the monitoring equipment and documentation of the monitoring results.

Each employee will be trained before initial assignment, prior to a change in assigned duties, if a new hazard has been created, or special deviations have occurred.

29.6 Entry Practice

Safe Work Permit and Confined Space Entry

A permit must be issued prior to any ALPHA employee entry into a confined space using the Rig Owner's work permit program.

Atmospheric Monitoring

A Competent Person, prior to entering the Confined Space, shall test the internal atmosphere.

An attendant must be assigned to the confined space when the individual performing atmospheric monitoring is inside, in addition to other precautions necessary for the particular space.

The atmospheric testing shall be performed with a calibrated direct-reading instrument.

Instrument calibration shall be conducted and documented each day the direct-reading instrument is used.

In order to account for the potential layering of contaminants in a confined space, the entire depth and width of the space shall be monitored.

The atmosphere shall be monitored for the following conditions in the order given:

- Oxygen content
- Flammable gases and vapors
- Potential toxic air contaminants

The monitoring results must be recorded on the Work Permit.

If tests indicate that the atmosphere is unsafe, the confined space shall be ventilated until the hazardous atmosphere is removed, before employee entry. The ventilation required shall be noted in the special “Precaution” section of the Safe Work Permit.

The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere.

Employees and or their representatives may request additional monitoring and the space be re-evaluated at any time prior to and during the confined space activity/operation.

If, after ventilating the space, tests indicate a hazardous atmosphere, no person will be allowed to enter unless equipped with an approved airline respirator equipped with an escape bottle or a self-contained breathing apparatus, safety harness, and lifeline. Such entries shall be made only during emergency situations and the number of workers participating shall be kept to a minimum.

29.7 Fire Prevention/Protection

Precautions shall be taken to prevent fires inside of confined spaces.

29.8 Piping/Vessel System Check

Energized piping systems shall be locked or blocked and tagged to isolate contaminants and energy.

29.9 Electrical Safety Check

Electrical energy sources shall be isolated.

29.10 Special Precautions

Communication requirements shall be evaluated during the hazard assessment. If an attendant is required, constant two-way communication shall be maintained between entrants and the attendant.

Low voltage, GFCI controlled or intrinsically safe lighting is required in metal tanks/vessels and in other confined spaces with flammable atmospheres. If GFCI’s are used on lights for confined space entry, backup lighting shall be immediately available in case the GFCI trips.

In potentially explosive or flammable atmospheres, non-sparking tools shall be used. Smoking, open flames, and cutting or welding is prohibited in these situations.

Continuous air monitoring, safety harnesses, and lifelines shall be required when the activities inside the confined space (such as cutting and welding, distributing accumulated sludge, or use of solvents) may produce a hazardous atmosphere; even if the initial atmospheric tests indicate a safe atmosphere.

At a minimum, an ATTENDANT is required for entries that involve any energy isolation, potential or actual hazardous atmosphere, engulfment, or entrapment.

Personal Protective Equipment such as coveralls, impervious gloves, boots, respirators, and face and eye protection shall be used as required by the nature of the operation to be performed.

Entrants shall wear a body harness with an attached lifeline secured to a fixed object outside the confined space unless there is written documentation on the safe work permit as to why it is more dangerous or impossible to do so.

In vertically accessed confined spaces, a mechanical hoisting device shall be immediately available for rescue.

29.11 Ventilation for Confined Space Entry

The forced air ventilation shall be so directed to ventilate the immediate areas where an employee is or will be present within the confined space and shall continue until employees have left the confined space;

The air supply of the forced air ventilation shall be from a clean source that does not increase the hazards in the space.

Ventilation smoke tubes shall be used to generate a visible smoke cloud in the confined space. This smoke shall be introduced into the space after the ventilation system has been set up so that the efficiency of the ventilation may be evaluated. If the "smoke test" indicates that the ventilation set up is not effective in carrying contaminants out of the confined space, the ventilation shall be rearranged and the smoke test repeated. This process shall be continued until the appropriate ventilation configuration has been established.

Exhaust fans should be used to provide local exhaust ventilation venting the fumes outside of the confined space during some tasks i.e., welding, and grinding. The hood/snorkel shall be located as close as possible to the point of generation of the fume or dust. As work progresses the hood/snorkel shall be moved in order to remain within inches of the work. In some cases, it may be desirable to have exhaust fans located away from the work area. A supply of flexible hose may be attached to the suction end of the air mover and then be

placed in the confined space to draw contaminants out of the space. Again, the efficiency of this set up shall be evaluated with a smoke test to ensure that contaminants are being pulled out of the space.

Ventilation shall consist of a pre-entry purge of several air changes, followed by additional air monitoring, and then continuous introduction of fresh air during occupancy.

29.12 Additional Training

A Competent Person shall review the additional training requirements. The training might include hazard communication; powder actuated tools, hearing conservation, respiratory protection, etc.

29.13 Hazards of Nearby Areas

A Competent Person shall evaluate hazards of near-by areas. These hazards might include water run-off, vehicle traffic, pedestrian traffic, outside contaminants (exhaust emissions, pop-off valves, etc.), overhead work, etc. The Competent Person along with assistance (as needed) shall ensure the confined space area is kept free of any discovered hazards and is authorized to use appropriate methods to protect the entrant(s). Methods for preventing said hazards may include: installing barricades and signs, stopping other work activities in close proximity, redirecting traffic flow of vehicles and/or pedestrians, etc. A plan of action must be decided upon and implemented prior to any confined space entry/activity. Any violation of the plan, hazard change(s), and/or newly discovered hazards will require confined space operations to cease until rectified.

29.14 Rescue Plan

The Rescue Plan shall be developed by a Competent Person and shall include provisions for training, practice drills, body harnesses, life lines, hoisting equipment, communications, response ability, etc. as needed.

Self-rescue and non-entry rescue shall be the rescue method of choice whenever possible.

Only trained personnel shall attempt rescue. Training shall include:

- Proper use of personal protective equipment
- Proper use of rescue equipment
- Current certification in first aid and CPR
- Blood-borne pathogens
- The same training as the authorized entrants
- Non-entry rescue techniques
- Rescue training on the types of rescues they will be expected to perform
- The rescue personnel shall be retrained in aspects of rescue at least annually

The Safe Work Permit shall be posted at the confined space entrance while employees are working in the confined space.

Rescue service(s) must be on-site for immediately dangerous to life and health (IDLH) conditions, while work is being performed.

29.15 Equipment

A direct reading instrument that measures the percentage of the lower explosive limit (LEL) and oxygen concentration simultaneously is recommended. Other atmospheric monitoring equipment shall be used for monitoring other known gases such as hydrogen sulfide, sulfur dioxide, etc., which may be present in confined spaces (tanks, vessels, etc.) as needed.

A self-contained breathing apparatus (SCBA) or a TYPE-C supplied-air respirator with an escape bottle (10-minute) shall be used in atmospheres Immediately Dangerous to Life and Health (IDLH) and/or confined space rescues.

Harness and lifelines – A harness shall be capable of retrieving an inert body in an upright position. A parachute-type harness with a single lifting ring attached to the upper back, or with dual lifting rings attached to the shoulder straps, is required for confined space that have recognized hazards or a vertical entry of over five feet.

Ventilation – A portable blower shall be used to ventilate the space when atmospheric monitoring or the work to be done in the space indicates an actual or potential hazardous atmosphere.

29.16 Maintenance of Equipment

A Competent Person shall inspect rescue equipment each quarter. The inspection shall be documented by colored tape on the equipment (see color codes for assured grounding) or on logs.

29.17 Entrants

Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.

Properly use equipment as required by this practice.

Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space as required.

Alert the attendant whenever:

- The entrant recognizes any warning sign or symptom of exposure to a dangerous situation
- The entrant detects a prohibited condition

Exit from the permit space as quickly as possible whenever:

- An order to evacuate is given by the attendant or the entry supervisor
- The entrant recognizes any warning sign or symptom of exposure to a dangerous situation
- The entrant detects a prohibited condition
- An evacuation alarm is activated

29.18 Attendants

Know the hazards of the specific confined space.

Be aware of possible behavioral effects of exposure to the hazards by the entrants.

Maintain a constant, accurate count of authorized entrants in the confined space.

Remain outside the confined space as long as entrants are in the confined space.

Maintain communication with the entrants.

Monitor conditions inside and outside the confined space to insure it is safe for the entrants to remain in the confined space.

Require evacuation of the confined space when conditions warrant evacuation.
Summon rescue and emergency personnel when needed.

Never allow unauthorized personnel into a confined space.

Attendants are not allowed to be assigned to monitor more than one permit space; however, attendants may be stationed at any location outside the permit space to be monitored as long as the duties described in this practice can be effectively performed for the permit space that is monitored.

29.19 Entry Supervisor

Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.

Verification by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.

Terminates the entry and cancels the permit as required by this practice.

Verifies rescue services are available and that the means for summoning them are operable.

Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations.

Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

In the event a confined space entry will involve multiple employers, the ALPHA Entry Supervisor will make direct contact with the other Entry Supervisor(s) to create, document, and disseminate a plan/procedure for ensuring the safety of all employees involved in the confined space operation. Without such an agreement among the other employers involved in the same confined space operation, ALPHA employees shall not be allowed to proceed with entry into the confined space.

Permits will be cancelled by the Entry Supervisor upon completion of the work, or when any prohibited condition arises. Permits cannot just be allowed to expire. Note: Cancelled permits must be retained for the annual review.

29.20 Program Review

The confined space entry program and cancelled permits shall be evaluated by the President (or designee) after any failure of the process and at least annually. The review shall be documented. The review will consist of reviewing any associated incident reports, entry permits, employee interviews, and any observation reports.

29.21 Record Retention

A Safe Work Permit indicating its expiration time and date must remain posted at the entrance to the confined space during entry.

The equipment inspection and calibration records shall be maintained for 3 years.

Training records shall be maintained for 5 years.

Personal Exposure Monitoring data shall be maintained for 30 years.

30. CONTROL OF HAZARDOUS ENERGY

30.1 Purpose

This Procedure establishes the minimum requirements for the control of hazardous energy sources. Energy Sources are any source of energy, i.e., electrical, spring, gravity, hydraulic, pneumatic, chemical, etc.

30.2 References

OSHA 29 CFR §1910.147 – Control of Hazardous Energy

30.3 Responsibilities

The President (or designee) will review the Owner Clients lockout/tagout program to ensure it meets or exceeds the ALPHA program.

The President (or designee) shall ensure that all employees are trained prior to assignment to a worksite.

The President (or designee) will conduct an annual audit of the program.

The Company Representative shall ensure that all employees are adequately trained in the Owner Client's program as part of their initial safety orientation and ensure that all employees are issued personal locks that will remain in their control, while working on that worksite.

In the event a group lockout/tagout is utilized, the most senior authorized ALPHA employee will have the primary responsibility of the associated employees under the protection of the lockout/tagout event.

30.4 Process

Where ALPHA employees share a site with Owner Client personnel; the ALPHA Control of Hazardous Energy Plan shall compliment the Client program. However, the minimum requirements set forth in this Practice shall be met.

Periodic inspections of the energy control procedure shall be conducted at least annually to ensure that the procedure is being followed. This inspection will be performed by the ALPHA President (or designee), Company Representative, Lead, or Supervisor other than the person using the lockout/tagout in progress. Documentation of the certified review of such an inspection will include: date, equipment, employees, and who performed the inspection.

30.5 General

This Procedure specifies methods of controlling hazardous energy sources during construction and maintenance activities involving work on electrical services, facilities, shop equipment, pressurized pipelines, and systems used as service lines for construction. This Practice also covers Practices to be used during start-up phases.

A standard “DANGER - DO NOT OPERATE” tag and individually keyed locks will be used at each worksite.

Tags used will be dated, signed and a description of the work being performed shown on the tag and securely attached to the equipment/lock.

No device shall be operated with a tag or lock attached regardless of circumstances.

No person shall remove another’s tag or lock unless the requirements of Section 30.6 are adhered to.

Each person performing work on a system is required to affix a lock and tag on the system even though the equipment or system is already locked out. In these situations, a multiple locking device shall be used.

30.6 Shutdown of Equipment and/or Machines

Prior to the authorized or affected employee turning off the machine(s) and/or equipment, the authorized employee shall have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the methods or means to control the energy, and that the methods or means for controlling the energy are available and ready for use.

The machine(s) and/or equipment shall be turned off or shutdown using established procedures for the machine or equipment (refer to Owner’s manual, as necessary). An orderly shutdown shall be utilized to avoid any additional or increased hazard(s) to employees as a result of the equipment stoppage.

All energy isolating devices that are needed to control the energy to the machine(s) or equipment shall be physically located and operated in such a manner as to isolate the machine(s) or equipment from the energy source.

Following the application of lockout or tagout devices (all energy isolating devices), all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe. If there is a possibility of re-accumulation of stored energy level(s), verification of isolation shall be continued until the servicing or maintenance is completed and/or until the possibility of such accumulation no longer exists.

Prior to starting work on machines and/or equipment that have been locked or tagged out, the authorized employee shall verify that isolation and de-energization of the machine(s) and/or equipment have been accomplished.

30.7 Emergency Removal of Employee's Lockout Lock

Each lockout/tagout (LOTO) device shall be removed from each energy-isolating device by the employee who applied the device.

When the employee who applied the LOTO device is not available to remove it, the device may be removed only after the following steps have been completed: The Company Representative shall:

- Verify that the employee who applied the LOTO device is not at the facility or available to return
- Make a reasonable effort to contact the employee to inform him or her that the LOTO device must be removed (The employee shall return to the project, without pay, to remove the lock, if possible)
- "Walk-down" the entire system to verify it is safe to start the system
- Ensure that the employee whose lock was removed has been notified prior to returning to work on the system

30.8 Training

Personnel shall receive LOTO training to include the following minimum requirements:

- Personnel shall receive LOTO training as required by the OSHA Standard for Control of Hazardous Energy Sources, to include instruction on:
 - Shutdown preparation
 - Machine and equipment shutdown
 - Machine and equipment isolation
 - Stored, residual, and potential re-accumulation of energy/energies
 - Verification of isolation
- Notify all affected employees that a LOTO out system is to be utilized on the project
- Maintain a list of the names and job titles of all employees who are authorized to lock out/tag out the specified machine or equipment
- All initial safety training and site orientations must be documented and maintained

Retraining of all affected employees will be conducted and documented when there is a change in:

- Assignments

- Equipment
- Processes
- When lock out/tag out inspections reveal a need or supervision determines a need
- New hazards or changes in the energy control procedure

31. ELECTRICAL SAFETY

31.1 Purpose

This Procedure gives the requirements to minimize unsafe conditions involving electrical equipment and tools, including faulty insulation, improper grounding, loose electrical connections, defective parts, ground faults in equipment, and unguarded live electrical parts.

Note: ALPHA employees are to consider all parts as being “live” even when de-energized and are to refer to Section 30. *Control of Hazardous Energy* for Lockout/Tagout protocols.

31.2 References

OSHA 29 CFR §1910 Subpart S

NFPA 70E – 2012 Electrical Safety in the Workplace

NFPA 70 – 2012 National Electric Code

31.3 Definitions

Competent Person – One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
Exposed (As applied to live parts) – Capable of being inadvertently touched or approached nearer than a safe distance by a person. It is applied to parts not suitably guarded, isolated, or insulated.

Ground – A conducting connection, whether intentional or accidental, between an electrical circuit or equipment and the earth, or to some conducting body that serves in place of the earth.

Ground-Fault Circuit-Interrupter – A device whose function is to interrupt the electric circuit to the load when a fault current to ground exceeds some predetermined value that is less than that required to operate the over current protective device of the supply circuit.

Guarded – Covered, shielded, fenced, enclosed, or otherwise protected by means of suitable covers, casings, barriers, rails, screens, mats, or platforms to remove the likelihood of approach to a point of danger or contact by persons or objects.

Isolated – Not readily accessible to persons unless special means for access are used.

Qualified Person – One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

31.4 Process

31.4.1 General

All personnel will be trained in the OWNER CLIENT site specific electrical safe work practices during their initial site orientation.

The President (or designee) and Company Representative(s) are designated as competent person(s) and will review the safe work procedures to assist in developing the training plan, are authorized to implement corrective actions to eliminate identified hazards, and are responsible for program execution.

All work requires a work permit to be issued before work starts by the OWNER CLIENT Representative.

All potential energy sources will be de-energized and field verified before work starts. If not able to de-energize system, only qualified individuals may perform work after consulting with Company Representative(s).

All employees shall be trained in and familiar with the safety-related work practices required by this procedure that pertains to their respective job assignments.

Qualified persons (i.e. those permitted to work on or near exposed energized parts) shall, at a minimum, be trained in and familiar with the following:

- The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment
- The skills and techniques necessary to determine the nominal voltage of exposed live parts
- The clearance distances and the corresponding voltages to which the qualified person will be exposed

If work is to be performed near overhead lines, the lines shall be de-energized and grounded, or other protective measures shall be provided before work is started.

When an unqualified person is working in an elevated position near overhead lines, the location shall be such that the person and the longest conductive object he or she may

contact cannot come closer to any unguarded, energized overhead line than the following distances:

- For voltages to ground 50kV or below - 10 feet (305 cm)
- For voltages to ground over 50kV - 10 feet (305 cm) plus 4 inches (10 cm) for every 10kV over 50kV

When an unqualified person is working on the ground near overhead lines, the person may not bring any conductive object closer to unguarded, energized overhead lines than the distances given above.

For voltages normally encountered with overhead power line, objects that do not have an insulating rating for the voltage involved are considered conductive.

When a qualified person is working in the vicinity of overhead lines, whether in an elevated position or on the ground, the person may not approach or take any conductive object without an approved insulating handle closer to exposed energized parts than shown above unless:

- The person is insulated from the energized part (gloves, with sleeves if necessary, rated for the voltage involved are considered to be insulation of the person from the energized part on which work is performed); or
- The energized part is insulated both from all other conductive objects at a different potential and from the person; or
- The person is insulated from all conductive objects at a potential different from that of the energized part

Any mechanical equipment capable of having parts of its structure elevated near energized overhead lines shall be operated so that a clearance of 10 ft. (305 cm) is maintained. If the voltage is higher than 50kV, the clearance shall be increased 4 in. (10 cm) for every 10kV over that voltage. However, under any of the following conditions, the clearance may be reduced:

- If insulating barriers are installed to prevent contact with the lines, and if the barriers are rated for the voltage of the line being guarded and are not a part of or an attachment to the vehicle or its raised structure, the clearance may be reduced to a distance within the designed working dimensions of the insulating barrier

Employees standing on the ground may not contact the mechanical equipment or any of its attachments, unless:

- The employee is using protective equipment rated for the voltage; or

- The equipment is located so that no un-insulated part of its structure (that portion of the structure that provides a conductive path to employees on the ground) can come closer to the line than permitted

If any mechanical equipment capable of having parts of its structure elevated near energized overhead lines is intentionally grounded, employees working on the ground near the point of grounding may not stand at the grounding location whenever there is a possibility of overhead line contact. Additional precautions, such as the use of barricades or insulation, shall be taken to protect employees from hazardous ground potentials, depending on earth resistivity and fault currents, which can develop within the first few feet or more outward from the grounding point.

Employees may not enter spaces containing exposed energized parts, unless illumination is provided that enables the employees to perform the work safely. Where lack of illumination or an obstruction precludes observation of the work to be performed, employees may not perform tasks near exposed energized parts. Employees may not reach blindly into areas that may contain energized parts.

When an employee works in a confined or enclosed space, e.g., manhole or vault, that contains exposed energized parts; the employee shall use protective shields, protective barriers, or insulating materials as necessary to avoid inadvertent contact with these parts. Doors, hinged panels, and the like shall be secured to prevent their swinging into an employee and causing the employee to contact exposed energized parts.

Conductive materials and equipment that are in contact with any part of an employee's body shall be handled in a manner that will prevent them from contacting exposed energized conductors or circuit parts. If an employee must handle long dimensional conductive objects, e.g., ducts and pipes, in areas with exposed live parts, the project shall institute work practices, e.g., the use of insulation, guarding, and material handling techniques, which will minimize the hazard.

Portable ladders shall have nonconductive side rails if they are used where the employee or the ladder could contact exposed energized parts.

Conductive articles of jewelry and clothing, e.g., watch bands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, or metal headgear, may not be worn if they might contact exposed energized parts. However, such articles may be worn if they are rendered nonconductive by covering, wrapping, or other insulating means.

Any equipment, which has not met the requirements of this program, shall not be made available or permitted to be used. Damaged items found during pre-use inspection, during use, and/or post-use will be returned for repair and/or replacement. Defective/Faulty equipment shall be not be used until repaired.

31.4.2 Approach Distances for Qualified Employees—Alternating Current

Voltage Range (phase to phase)	Minimum Approach Distance
300V and less	Avoid Contact
Over 300V, not over 750V	1 ft. 0 in. (30.5 cm)
Over 750V, not over 2kV	1 ft. 6 in. (46 cm)
Over 2kV, not over 15kV	2 ft. 0 in. (61 cm)
Over 15kV, not over 37kV	3 ft. 0 in. (91 cm)
Over 37kV, not over 87.5kV	3 ft. 6 in. (107 cm)
Over 87.5kV, not over 121kV	4 ft. 0 in. (122 cm)
Over 121kV, not over 140kV	4 ft. 6 in. (137 cm)

31.4.3 Two Approved Methods of Protecting the Worker from a Ground Fault

In addition to other requirements for equipment-grounding conductors, the two approved methods are:

- Use of ground fault circuit interrupters (GFCI)
- An assured equipment grounding conductor program

NOTE: Only one of the two methods can be used for personnel safety at a single location. A combination of both methods cannot be used within a single location.

31.4.3.1 Ground Fault Circuit Interrupter (GFCI)

Attention shall be given to proper installation and maintenance of GFCIs within the requirements of the National Electrical Code (NEC) current edition (2011). The system shall be tested before being put in service, and the test results shall be documented and kept on file.

In purchasing GFCIs, the specifications shall state that GFCIs shall meet the Underwriters Laboratories Standard 943, Ground Fault Circuit Interrupters.

Each circuit protected by a circuit breaker GFCI requires its own neutral conductor.

Receptacle-type GFCIs may be used on common neutral systems and where receptacles are more than 250 feet from the breaker.

A GFCI polarity tester shall be used to ensure trip current values and to test the satellite receptacles downstream from the receptacle containing a GFCI.

GFCIs are to be installed on circuit breakers used for construction power.

31.4.3.2 Assured Equipment Grounding Program

Whenever possible, GFCIs are to be used instead of an Assured Grounding Program.

The goals of an effective program are:

- To reduce the potential of injuries caused by electric shock from cord sets, receptacles, and equipment connected by cord and plug
- To meet the requirements of local, state, and federal rules and regulations

The electrical supervisor shall ensure that an inspection and test be performed on each cord set, electric tool, piece of electrical equipment, and receptacle using the following schedule:

- Before first use
- Before equipment is returned to service following repairs
- Before equipment is used following any incident that can be reasonably suspected to have caused damage to the cord set, electric tool, piece of electrical equipment, or receptacle.
- Every month

Each cord set, electric tool, receptacle, and piece of electrical equipment shall be tested to ensure a continuous ground circuit, and that the equipment grounding conductor is connected to its proper terminal. The testing equipment shall be capable of testing for ground conductor continuity and resistance line fault and proper connection of conductors to terminals. Testing equipment shall also be tested each month. These results shall be documented and the documents shall be maintained by the electrical supervisor and a copy in the HSE files.

Receptacles that are a permanent part of the wiring of permanent buildings are excluded from the monthly testing and inspection requirements of this Practice. Also excluded are trailers, change shacks, butler-type buildings, and similar structures. However, after installation and before initial use and on a quarterly basis thereafter, each receptacle shall be tested.

NOTE: If permanent receptacle(s) of permanent buildings, trailers, change shacks, butler-type buildings, or similar structures are being used to support construction activities, a ground fault circuit interrupter device must be employed in conjunction with each cord set, electric tool, or piece of electrical equipment.

The user shall, visually inspect daily, each cord set, electric tool, or piece of electrical equipment, before it is used for signs of damage. These items shall be

inspected for signs of frayed or damaged insulation, crushed cable, loose or missing covers or screws, missing ground prongs on plugs, and other similar substandard conditions. Equipment found to be damaged or defective shall not be used until repaired.

Any electric tool, cord set, or piece of electrical equipment bearing an expired inspection sticker or no inspection sticker shall be considered defective and is not to be used until it is inspected.

If an alternate color-coding scheme is required by client requirements, it shall be specified in the project's written Assured Grounding Plan.

31.5 Guarding Live Parts

Live parts, 50 volts or more, shall be guarded against accidental contact except by qualified authorized persons.

32. FALL PROTECTION

32.1 Purpose

This procedure provides the minimum requirements to ensure the safety of employees performing work in elevated areas. This procedure is to be used to supplement the Owner Client's Fall Protection Program, if necessary.

32.2 Responsibilities

The President (or designee) shall review the Owner Client's Fall Protection Plan prior to ALPHA employees reporting to the work site. A determination will be made if the Plan ensures protection to ALPHA employees. If needed a supplemental plan must be developed.

32.3 References

OSHA 29 CFR §1910 App C – Personal Fall Arrest System

ANSI/ASSE A10.32-2004 – Fall Protection Systems for Construction and Demolitions

32.4 Definitions

100% Fall Protection – Protecting the worker from the possibility of a fall at all times. This includes when moving or stationary. 100% fall protection, includes: guardrail systems, nets, tie off, catch platforms, etc.

100% Tie-Off – Using safety harnesses with lanyard(s) tied-off at all times. Usually this means using two lanyards.

Anchorage – A secure point of attachment for lifelines or lanyards that is independent from any means of supporting or suspending a work platform.

Body Harness – A series of straps secured about the worker in a manner to distribute the fall arrest forces over the thighs, pelvis, waist, chest and shoulders with a means for attaching it to other components of a personal fall arrest system.

Competent Person – An individual knowledgeable of fall protection equipment. This knowledge includes the manufacturer's recommendations and instructions for proper use, inspection, and maintenance; and who is capable of identifying existing and potential fall hazards. A Competent Person has the authority to take prompt corrective action to eliminate those hazards and is knowledgeable of the rules contained in this section regarding the erection, use, inspection, and maintenance of fall protection equipment and systems.

Connector – Used to couple parts of the fall protection system together.

Elevated Surface – Any surface designed to be a walkway or working area that is 6 feet (1.8meters) above the adjacent floor or ground level. This does not include enclosed rooms, halls, stories of a buildings, etc.

Fall Hazard – Where the potential for an employee to fall, (i.e., to a level 6 feet or more below, 6 feet or more on the same level or into hazardous machinery or equipment).

Fall Protection Work Plan - A written document in which the employer identifies all areas on the jobsite where a fall hazard exists. The Plan describes the method or methods of fall protection to be used to protect employees, and includes the procedures governing the installation, use, inspection, and removal of the fall protection methods that are selected by the employer.

Fall Distance – The actual distance between the location of an employee's harness attachment point and the location of the attachment point when it comes to a full stop.

Full Body Harness – A configuration of connected straps to distribute a fall arresting force over at least the thighs, shoulders, and pelvis, with provisions for attaching a lanyard, lifeline, or deceleration device.

Lanyard – A flexible line of wire rope or strap that is used to secure the body harness to a lifeline or anchorage point.

Lifeline – A flexible line used for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to an anchorage at both ends to span horizontally (horizontal lifeline).

Self-Retracting Lanyard – A device that contains drum-wound line that may be slowly extracted from or retracted onto the drum under slight tension during normal movement of the user.

Work Area – That portion of a walking/working surface where job duties are being performed.

32.5 Process

32.5.1 Requirements

It shall be the policy and intent of ALPHA that all employees shall be protected from fall hazards by using 100% fall protection.

Before starting a project, the President (or designee) shall review the Owner Client companies Fall Protection Procedure. The President (or designee) and the Company Representative(s) shall make an initial survey of the types of fall hazards expected and develop a Plan for providing the kind and number of safeguards that shall protect employees from these fall hazards. A fall exposure occurs when an employee's feet are six (6) feet or more above a work area.

32.5.2 Fall Protection Plan

The Competent Person shall review the Owner Client fall protection plan to help in the development and implementation of the ALPHA Fall Protection Plan, including each area of the work place employees are assigned and where fall hazards of 6 feet or more exist.

The Fall Protection Plan shall:

- Identify all fall hazards in the work area
- Describe the methods of fall arrest or fall restraint to be provided, which meet and/or exceed applicable OSHA, ANSI, and/or ASTM standards
- Describe the correct procedures for the assembly, maintenance, inspection, and disassembly of the fall protection system to be used
- Describe the correct procedures for handling, storing, and securing tools and materials
- Describe the method of providing overhead protection for workers who may be in, or pass through the area below the work site
- Describe the method for prompt, safe rescue of suspended workers
- Be available on the project site for inspection
- Describe the employee's role in fall protection
- In the event an employee falls, or some other related, serious incident occurs, (e.g., a near miss) the employer shall investigate the circumstances of the fall or

other incident to determine if the fall protection plan needs to be changed (e.g. new practices, procedures, or training) and shall implement those changes to prevent similar types of falls or incidents

- The fall protection plan shall be prepared by a qualified person and developed specifically for the site where the leading edge work, precast concrete work, or residential construction work is being performed and the plan must be maintained up to date
- Employees performing work in areas where fall hazards exist shall:
 - Insure the Fall Protection Plan covers the work being performed
 - Inspect fall protection devices and systems to ensure compliance with applicable parts of this Practice

32.5.3 Fall Restraint and Fall Arrest Systems

When employees are exposed to a hazard of falling from a location 6 feet or more in height, the Rig Leader shall ensure that fall restraint or fall arrest systems are provided, installed, and implemented according to the following requirements.

Fall restraint and fall arrest systems shall meet the minimum requirements of ANSI/ASSE A10.32-2004 – Fall Protection Systems for Construction and Demolitions.

Fall Restraint Systems (safety harnesses & lanyard hardware assemblies) shall:

- Allow the movement of employees only as far as the sides and edges of the walking/working surface
- Be capable of withstanding a tensile loading of 5,000 pounds without cracking, breaking, or taking a permanent deformation
- Have confirmed component compatibility by company representative(s)
- Be inspected prior to each use for mildew, wear, damage, and other deterioration, and defective components
 - If found defective, shall be removed from service if their function or strength has been adversely affected
- Have anchorage points used for fall restraint capable of supporting two times the intended load

Fall Arrest Systems shall consist of the following:

- Guard Rails
 - The primary method of protection is to provide a guardrail that prevents falling from the unprotected side or edge of an elevated surface
- Full Body Harness – An approved Class III full body harness shall be used
 - Only use body harnesses and components for employee protection. Do not use them to hoist materials.

- Attach the body harness to the center of the wearer's back near the shoulders.
- Harnesses must limit the arresting force on the employee to 1800 pounds
- Use of belt type fall protection is prohibited
- Body harness systems shall be rigged such that the fall distance is a maximum of 6 feet, and the employee will not contact any lower level
- Deceleration Device
 - Deceleration devices are used to dissipate or otherwise limit the energy imposed on an employee during fall arrest. Deceleration devices include rope grabs, rip-stitch lanyards, specially woven lanyards, tearing or deforming lanyards, and automatic self-retracting lifelines/lanyards.
- Lanyards and Lifelines
 - Lanyards and lifelines should be protected from cuts and abrasions and have a minimum breaking strength of 5,000 pounds
 - When using horizontal lifelines, design, install, and use the lifeline under the supervision of a qualified person only
 - When using vertical lifelines, attach each employee to a separate lifeline
 - When using self-retracting lifelines and lanyards, which automatically limit free fall distance to 2 feet or less, the lifeline must be able to sustain a minimum tensile load of 3,000 pounds when fully extended
 - Self-retracting lifelines and lanyards, which do not automatically limit free fall distance to 2 feet or less, should be able to sustain a minimum tensile load of 5,000 pounds when fully extended
 - When using rip-stitch, tearing, and deforming lanyards, the lifeline must be able to sustain a minimum tensile load of 5,000 pounds when fully extended

32.5.4 Rescue of Suspended Employees

Rescue Plans shall be provided for suspended employees. Employees shall be able to rescue themselves or prompt rescue shall be available.

Rescue equipment shall be inspected quarterly. The inspection shall be documented.

Rescue equipment shall be identified in the project Fall Protection Plan. All rescue equipment shall be immediately available.

32.5.5 Guard Rail Systems

Temporary guardrail systems shall be capable of supporting 200 pounds of force directed either downward or toward the fall hazard.

Upright supports shall be no more than eight feet apart.

Guardrail systems shall consist of a hand rail about 42 inches above the floor (plus or minus 3 inches) and a mid-rail located midway between the floor and handrail. Toe boards shall be placed around the bottom of the guardrail system.

If wire rope is used for guardrail systems, the wire rope shall not have more than three inches of deflection. The openings between the wire ropes shall not exceed 19 inches.

Employees shall use a fall arrest system when placing or removing guard rail systems.

Employees shall not tie off to guard rail systems.

32.6 Training

Employee Training as required by this section shall be documented and shall be available on the project site.

Employees shall be trained by a competent person in the following areas:

- The nature of the fall hazards
- The correct procedures for erecting, using, inspecting, and disassembling the fall protection systems
- The limitations of the fall protection systems
- Each employee's role in the safety monitoring system (if used)
- The correct procedure for handling, storing and inspecting fall protection equipment
- The correct method of wearing and attaching safety harnesses and lanyards
- The requirements of the Host Company and OSHA

Employees shall be retrained and appropriate documentation completed:

- Annually
- When changes in the work place render previous training obsolete
- If the Plan proves to be inadequate in any way
- If a change in the types of fall protection systems or equipment to be used renders previous training obsolete

32.7 Record Retention

Documentation of training in the use of fall protection shall be kept on file in the HSE office and work site files.

33. HAZARD COMMUNICATION

33.1 Purpose

To establish the policies and procedures concerning Hazard Communications that will enhance the safety and well-being of ALPHA employees who could be exposed to chemicals in the workplace. Furthermore, execution of this program is designed to provide for compliance with the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard.

33.2 References

OSHA 29 CFR §1910.1200 – Hazard Communication

OSHA 29 CFR §1915 Subpart Z – Toxic and Hazardous Substances

OSHA 40 CFR §355 – Emergency Planning and Notification

OSHA 40 CFR §370.25, §370.40, §370.41 – Hazardous Reporting

33.3 Definitions

Chemical – Any substance or mixture of substances.

Chemical Name – The scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name that will clearly identify the chemical for the purpose of conducting a hazard classification.

Classification – To identify the relevant data regarding the hazards of a chemical; review those data to ascertain the hazards associated with the chemical; and decide whether the chemical will be classified as hazardous according to the definition of hazardous chemical. In addition, classification for health and physical hazards includes the determination of the degree of hazard, where appropriate, by comparing the data with the criteria for health and physical hazards.

Common Name – Any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name.

Container – Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

Employee – A worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers or bank tellers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

Employer – A person engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a contractor or subcontractor.

Exposure or Exposed – When an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g. accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry (e.g. inhalation, ingestion, skin contact or absorption).

Hazard Category – The division of criteria within each hazard class, e.g., oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

Hazard Class – The nature of the physical or health hazards, e.g., flammable solid, carcinogen, oral acute toxicity.

Hazard Not Otherwise Classified (HNOC) – An adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in this section. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this section, but the effect either falls below the cut-off value/concentration limit of the hazard class or is under a GHS hazard category that has not been adopted by OSHA (e.g., acute toxicity Category 5).

Health Hazard – A chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in Appendix A to §1910.1200 -- Health Hazard Criteria.

Immediate Use – The hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Label – An appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging.

Label Elements – The specified pictogram, hazard statement, signal word and precautionary statement for each hazard class and category.

Physical Hazard – A chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. See Appendix B to §1910.1200 -- Physical Hazard Criteria.

Pictogram – A composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under this standard for application to a hazard category.

Precautionary Statement – A phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical or improper storage or handling.

Product Identifier – The name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical.

Pyrophoric Gas – A chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F (54.4 degrees C) or below.

Responsible Party – Someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

Safety Data Sheet (SDS) – Written or printed material concerning a hazardous chemical that is prepared in accordance with paragraph (g) of §1910.1200.

Signal Word – A word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for the less severe.

Simple Asphyxiant – A substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

Specific Chemical Identity – The chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

Substance – Chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Work Area – A room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

33.4 Responsibilities

The ALPHA President and/or designee will assume duties as Hazard Communication Officer. This position carries the responsibility of insuring this program is adhered to and that proper reporting is executed.

33.5 Program

33.5.1 Hazardous Chemical List

Each worksite should compile and maintain a hazardous materials list. Once the list has been completed, it should be kept up-to-date and forwarded to the President (or designee) and Owner Client (as applicable). Any new hazardous materials introduced in a work area(s) must be added to the list as soon as possible. This list may be used for various purposes, including employee training, hazard assessments, emergency response plan preparation, etc.

33.5.2 Material Safety Data Sheet (MSDS) & Safety Data Sheet (SDS)

A Material Safety Data Sheet (MSDS) or a Safety Data Sheet (SDS) must be on hand for each hazardous chemical in inventory. MSDS/SDS must be located in an area that is readily accessible to ALPHA employees using the hazardous chemical(s). Electronic MSDS/SDS files are acceptable. The transition period for manufacturers to supply revised, GHS-compliant SDS runs until December 1, 2015; after which time, all ALPHA employees must have a revised SDS on file for all of his/her chemicals. MSDS/SDS should be filed in the following manner:

- When an MSDS/SDS is received, its creation or revision date should be compared to any existing MSDS/SDS for that hazardous chemical made by the same manufacturer
 - If there is already an MSDS/SDS with the same date in the file, discard the new copy
 - If the creation date or revision date is newer than the date of an existing MSDS/SDS, replace the older version with the new revision and send the old MSDS/SDS to the President (or designee) and/or Owner Client to be archived.
 - Place a note on the MSDS/SDS indicating that it is an “old” MSDS/SDS.

If an MSDS/SDS cannot be obtained from the supplier or from the web site, contact the ALPHA President (or designee) with the chemical name and the manufacturer's name for assistance in obtaining an MSDS/SDS.

33.5.3 Labeling Hazardous Materials

ALPHA uses a combination of manufacturer labeling systems and Owner Client labeling systems to identify containers of hazardous chemicals.

Manufacturer's labeling systems provide, at a minimum: the identity of the chemical, appropriate hazard warnings, and the name and address of the manufacturer. New GHS-compliant labels are also starting to become available. These labels have a standardized format and must include, at a minimum, the following content: a product identifier, signal word, hazard statement(s), pictogram(s), precautionary statement(s), and the name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

Under the revised Hazard Communication Standard, manufacturers are permitted to supply chemicals with labels that conform to either the old or newly-revised Hazard Communication Standard during the transition period; after which time, GHS-compliant labeling will become mandatory. For this reason, operating units must be familiar with both the old and new labeling requirements in the interim.

Internal labeling systems provide, at a minimum, the identity of the chemical and appropriate hazard warnings. Both systems may use a combination of American National Standards Institute (ANSI), National Fire Protection Association (NFPA), Hazardous Materials Identification Guide/System (HMIG/HMIS) and U.S. Department of Transportation (DOT) labeling protocols. ALPHA employees are familiarized with these labeling protocols during hazard communication training.

Hazardous chemical container labels may not be removed or defaced until the container has been cleaned or purged of its contents, and there is no longer any hazard associated with the container. The labels from containers that contain P-listed waste/residue are not to be removed. These containers should be turned over for proper management and disposition.

If the contents are transferred into another container, that container must also meet the above labeling requirements. If a container is discovered with no label, report it immediately to one's supervisor and/or President (or designee).

33.5.4 Training

ALPHA employees must be provided with effective information and training regarding hazardous chemicals in the work area at the time of initial assignment to the work area and whenever new physical or health hazards are introduced to their work areas.

Employees must also receive information and training upon transfer to a work area containing new or different physical or health hazards.

Initial generalized hazard communication training will be provided by ALPHA with work area-specific training conducted by employee supervisor(s) and/or Owner Client (s).

Training will include information covering the following topics:

- Applicable portions of the Hazard Communication Standard
- Typical uses of hazardous chemicals in the work area
- Location and availability of ALPHA's written Hazard Communication Program
- Methods and observations which can be used to detect releases of hazardous chemicals
- Typical physical and health hazards encountered in the work area(s)
- Work practices, emergency procedures, and personal protective equipment employees can use to protect themselves from hazardous chemicals
- Details of the ALPHA Hazard Communication Program including, labeling systems in use, MSDS/SDS information, and how to obtain and use hazard information

Additional training, specific to the job, includes

- Potential for exposure to hazardous materials
- Job position(s) and/or assignment(s)
- The location and use of hazardous materials

A new employee (SSE) may require direct supervision for a short period of time by an experienced employee (SSE Mentor) to make sure that they are following proper procedures.

Note: Due to the 2012 revision to OSHA's Hazard Communication Standard, ALPHA employees will be provided with updated training that describes changes to the chemical classification process, Safety Data Sheet structure and content, and new chemical labeling requirements. The training will be offered both online and in-person, to reach the widest possible audience, and must be completed on or before December 1, 2013.

There is no requirement for annual retraining under the Hazard Communication Standard; however, ALPHA requires employees to attend hazard communication refresher training once every two years. *Caveat: Supervisors must immediately train affected employees on any new hazardous chemicals introduced to the work area.*

33.5.5 Storage

All storage areas for hazardous substances are to be secured, properly ventilated, and identified by signs.

33.5.6 Non-Routine Tasks

From time to time, ALPHA employees may be required to perform non-routine tasks that involve the use of hazardous chemicals or processes. Before conducting non-routine tasks supervisors shall ensure that employees are informed of:

- The specific hazards associated with the performance of the task
- Protective measures that must be used
- Measures that have taken to lessen these hazards (ventilation, personal protective equipment, or the presence of another employee)
- Specific emergency procedures to be used in the event of an accident or injury

33.5.7 Other Personnel Exposures (Contractors)

ALPHA President and/or designee will provide other personnel or outside contractors with the following information as follows:

- Hazardous chemicals to which they may be exposed to while in the workplace
- Measures to minimize the possibility of exposure
- Location of the MSDS and labeling requirements for all hazardous chemicals
- Procedures to follow, if he/she/they are exposed

33.5.8 ALPHA Operating on Another Party's Property

In cases where ALPHA uses hazardous chemicals on another party's property, and employees of that party may be exposed to those hazardous chemicals, the ranking ALPHA representative at the site must inform the other party's representative of the following hazard communication items:

- The availability of on-site MSDS/SDS
- Precautionary measures for normal and emergency operations
- Information about the labeling system(s) being used

This may be accomplished by giving the party's representative a copy of the ALPHA Hazard Communication Program and referring the party's representative to the ALPHA President (or designee) for any additional questions.

33.6 Record Retention

33.6.1 Inventory and MSDSs/SDSs

Chemical inventories and MSDSs/SDSs are considered “employee exposure records.” The OSHA regulation entitled “Access to Employee Exposure and Medical records” (29 CFR § 1910.1020) requires that either MSDSs/SDSs or chemical inventories be retained for a period of 30 years. ALPHA will retain both types of documents for at least 30 years.

33.6.2 Training

Documentation of Hazard Communication training shall be kept on file.

33.7 Program Compliance

Any direct or intentional violation or non-compliance with this program may result in the termination of the person or persons involved, in accordance with ALPHA policy.

34. HEAT STRESS

34.1 Purpose

The purpose of this Procedure is to provide an effective Heat Stress Prevention Program to reduce and control the hazards of heat stress in the workplace.

34.2 Definitions

Heat Cramps – are painful muscle spasms caused when workers fail to replace the body's salt loss that occurs during excessive perspiration (especially with non-acclimatized workers).

Heat Exhaustion – results from excessive loss of salt and/or water through sweating. The worker with heat exhaustion still sweats, but experiences extreme fatigue, weakness, giddiness, nausea, or headache. The skin is clammy and moist, the complexion pale or flushed, and the body temperature normal or slightly elevated.

Heat Rash – also known as prickly heat; may occur in hot, humid environments where sweat is not easily removed from the surface of the skin by evaporation. This is common when using protective equipment, especially impermeable clothing. Heat rash can become uncomfortable when extensive or complicated by infection.

Heat Stroke – the most serious health problem for workers in hot environments is caused by the failure of the body's internal mechanism to regulate its core temperature. Sweating stops and the body can no longer rid itself of excess heat. Signs/Symptoms include: mental confusion, delirium, loss of consciousness, convulsions or coma, a body temperature of 105

degrees or higher and hot dry skin which may be red and flushed. Victims of heat stroke may die unless treated promptly and correctly.

34.3 Process

34.3.1 Heat Stress

Heat stress is the result of the combination of several factors. The following factors should be evaluated to determine the potential for heat stress:

- Ambient temperature
- Humidity
- Type of work required – heavy, moderate, or light work
- Required work clothing – the potential for heat stress increases as the impermeability of the work clothing increases
- Employee conditioning and/or acclimatization
- Previous project experience or history

Whenever it is determined that a heat stress environment exists, heat stress preventive measures shall be implemented.

34.3.2 Preventative Measures

Heat stress is the combination of environmental and physical work factors that constitute the total heat load imposed on the body. One of the best ways to reduce heat stress on workers is to minimize the amount of heat in the workplace. However, there are some work environments where heat production is difficult to control, such as active steam lines, high ambient temperature processes, humid work areas, or radiant heat from the sun or a furnace. However, most heat-related health problems can be prevented or the risk of developing them reduced. When unacceptable levels of heat stress can potentially occur, there are generally five approaches to a solution:

- Modify the environment
- Modify the clothing or equipment;
- Modify the work practices
- Modify the worker by heat acclimatization
- Modify production with a work/rest regiment

34.3.3 Engineering Controls

A variety of engineering controls, including ventilation and spot cooling at points of high heat production may be helpful. Shielding may be required as protection from radiant heat sources. Evaporative cooling and mechanical refrigeration are other ways to reduce

heat by engineering controls. The use of extra air moving can be added to increase the turnover rate of interior air and remove heat inside enclosures. Cooling fans can increase air velocity and promote evaporation in hot conditions. Shutting down hot process or feed lines is most effective, but equipment modifications, such as using mechanical equipment over manual labor also reduce the exposure.

Auxiliary cooling systems can range from simple ice vests, pre-frozen and worn under the clothing, to more complex systems; however, cost of operation and maintenance vary considerably in all of these systems. Four auxiliary cooling systems presently available are:

- Water-cooled garments, such as water-cooled vest, undergarments, hoods, etc., which require a circulating pump, liquid container, and battery
- Air-cooled garments, such as suits and hoods, that require a vortex tube, connecting hose and a constant source of compressed air
- Ice pack vest, which although frozen before worn, do not provide continuous regulated cooling and require the use of backup frozen units every 2 to 3 hours
- Wetted over-garments, which can be as simple as wet cotton terry cloth coveralls worn over protective clothing; the wetted over-garment works best when there is air blowing across the wet garment to increase evaporation

34.3.4 Work Practices

Work practices can help reduce the risk of heat disorders. Making plenty of drinking water available at the workplace and urging workers to drink often shall be standard practice in all situations of potential heat stress. In high heat stress environments, an employee can lose as much as one quart of liquid per hour. When possible and especially during acclimatization, products that have been formulated to replace electrolytes and match the weight of the body fluids lost by the sweating process should be used. This is necessary to enable the body to quickly absorb replacement minerals. Do not use salt tablets.

Training supervisors to recognize and be able to correctly treat heat stress disorders is absolutely essential. Prospective workers physical condition(s) should also be considered when determining their fitness for working in a hot environment. Older workers, obese workers, and those workers taking some type of medication are usually at a greater risk.

34.3.5 Acclimatization

Acclimatization to heat through short exposures followed by longer periods of work in the hot environment can reduce heat stress. New employees (SSEs) and workers returning from an absence of two weeks or more should have a five-day period of acclimatization. This period should begin with a less than normal workload and time exposure on the first day and gradually build up to normal workload and exposure on the fifth day.

34.3.6 Work/Rest Regimen

There are many times when engineering and other controls are not sufficient and administrative controls must be instituted for worker protection. One effective administrative control is the work/rest regimen that limits the time worked in the hot environment according to the type of work, environmental conditions, and clothing requirements. Work/rest periods are generally conservative because they are:

- Based on calculated approximations of heat stress
- Designed to protect most workers

As a result, many acclimatized workers can work longer than the allotted time period.

Alternating work and rest periods with longer rest periods in a cool area (77°F. or less) can help workers avoid heat strain. Keep in mind that poor physical condition will also impair the ability to work in a hot environment. Older, over-weight individual, or those in poor health may not be able to follow average work/rest regimens. Supervisors shall permit employees to take additional rest breaks as needed in potential heat stress conditions.

34.3.7 Employee Training

Heat Stress training is the key to avoiding problems. ALPHA employees must understand the reasons for using appropriate work practices in order for the program to succeed. The heat stress training program for ALPHA employees shall cover the following:

- Heat stress, its components and effects
- Signs and symptoms of heat disorders
- First-aid practices for and potential health effects of heat stress
- Pre-disposing factors to heat stress, e.g., drug use (including therapeutic) and alcohol in a hot work environment
- Protective clothing/equipment and its impact in hot environments
- Environmental and medical surveillance programs
- Importance of maintaining body fluids at normal levels
- Various engineering controls to reduce the impact of hot environments
- Administrative measures such as work/rest regimens in use to prevent heat stress
- Acclimatization, how it is achieved, and its limitations

The components of the heat stress prevention program

35. HYDROGEN SULFIDE (H₂S) SAFETY

35.1 Purpose

The purpose of this Procedure is to assure that all ALPHA employees performing job tasks in which a potential Hydrogen Sulfide (H₂S) exposure could occur, are protected.

Compliance with this program is mandatory and is applicable to all ALPHA employees who work in an environment where H₂S may be present in any amount. Failure to comply will result in disciplinary action and/or is grounds for termination.

35.2 References

OSHA 29 CFR §1910.132-138 – Personal Protective Equipment standards

OSHA 29 CFR §1910.119 – Process Safety Management of Highly Hazardous Chemicals

OSHA 29 CFR §1910.146 – Permit-required Confined Spaces

OSHA 29 CFR §1910.1000 – Air contaminants

OSHA 29 CFR §1910.1200 – Hazard Communication

35.3 Definitions

Hydrogen Sulfide (H₂S) – Colorless gas or liquid, with the odor of rotten eggs (sulfur smell).

Permissible Exposure Limit (PEL) - means the dermal or inhalation exposure limit. For Hydrogen Sulfide (H₂S), the PEL is 10 PPM.

35.4 Introduction

Exposure to Hydrogen Sulfide (H₂S) occurs in many industries. Most exposures center on the oil and natural gas industries. H₂S is an extremely toxic, flammable gas that may be encountered in the production of gas well gas, high-sulfide high sulfur content crude oil, crude oil fractioning, associated gases, and waters. H₂S is heavier than air, and can collect in low places. As an employee of the company, potential exposure to various forms and amounts of H₂S may occur during certain job activities. However, any exposure should be avoided. If an exposure cannot be avoided through ventilation, etc., proper personnel protective equipment must be used.

35.5 Forms of Hydrogen Sulfide (H₂S)

H₂S exposures are almost exclusively through inhalation. However, other exposures such as ingestion should not be overlooked. Inhalation at certain concentrations can result in injury

and/or death. The listed IDLH (immediately dangerous to life and health) level is extremely low (300 PPM).

35.6 Health Effects of H₂S Overexposure

If steps are not taken to control exposure, continued inhalation of Hydrogen Sulfide Hydrogen Sulfide could result in:

- Loss of sense of smell
- Death

In low concentration exposures (under 10 PPM), H₂S can be detectable by its odor. However, the smell cannot be relied upon to forewarn of dangerous concentrations, because it rapidly paralyzes the sense of smell. A longer exposure to the lower concentrations may result in the loss of the sense of smell. Symptoms from repeated exposure to low concentrations usually disappear after being removed from the exposure for a period of time.

In higher concentration exposures (10 PPM and above), whether prolonged or not, may lead to death. It should be well understood that the sense of smell will be rendered ineffective by H₂S, which can result in an individual failing to recognize the presence of dangerously high concentrations. Exposure to H₂S causes death by poisoning the respiratory system.

35.7 Reporting of Problems

Immediately notify your supervisor if you develop potential signs or symptoms associated with H₂S exposure. You should also notify your supervisor if you have difficulty breathing while wearing a respirator or suspect problems with other personal protective equipment (PPE).

35.8 Exposure Assessment

The Company Representative(s) and/or President (or designee) will determine if ALPHA employees are exposed to concentrations of H₂S. The exposure determination shall be based personal exposure monitoring.

If the initial exposure determination reveals employee exposure to be below the STEL, continuous monitoring will be performed. In addition, continuous ventilation shall be used. Appropriate personnel protective equipment will be worn by all employees exposed to H₂S.

35.9 Preventing Exposure

Proper control of exposure to H₂S is the responsibility of the Owner Client, ALPHA, and the employee. All of the control methods discussed below is essential to minimize additional sources of H₂S absorption from inhalation. Strict compliance with the following provisions

can virtually eliminate several sources of H₂S exposure that significantly contribute to excessive H₂S absorption:

- Review the site specific safety programs as well as the site emergency action plan
- Ventilation systems may provide for venting of the H₂S vapor prior to entrance into the area
- Confined Space Entry Procedures will greatly reduce the hazards to employees and should be followed whenever entry into a confined space is required (For further details, review the ALPHA Confined Space program)
- Respiratory Protection shall be used in combination with continuous monitoring when warranted by the conditions of the area
 - Exposure to hazardous materials requires special precautions against absorption of toxic compounds. While engineering controls (e.g. ventilation systems) are the primary means of controlling materials such as H₂S vapors, it is often necessary to rely on respiratory protection. The respirator will give you the proper amount of protection based on the nature of the hazard. Only use respirators tested and certified by the National Institute for Occupational Safety & Health (NIOSH).
 - The cartridges that come with the mask are approved for the environment in which you will be working.
 - Never use a cartridge respirator in an atmosphere containing less than 19.5% oxygen or an atmosphere immediately dangerous to life and health (IDLH). In addition, observe the requirements of the ALPHA Respiratory Program. In extreme cases a NIOSH certified air purifying respirators may be required.
 - If Self-contained breathing apparatus is to be worn, all provisions applicable to the use of respirators apply as well as the as the provisions of the ALPHA Respiratory program.
 - If at any time the alarm sounds or there is an equipment malfunction, the area is to be evacuated and reevaluated prior to re-entry.
- Gas detection equipment shall be used whenever an entry into an area which may contain H₂S vapor
 - Equipment shall be operated per the manufacturer's instructions
 - Personal or fixed area monitors will alarm when permissible exposure limit (PEL) exceeds the preset level of 20 PPM for 1910 or 10 PPM for 1926
 - Detection equipment shall be calibrated prior to use and on a schedule per the manufacturer's instructions
 - Continuous monitoring shall be used when H₂S has been detected
- Protective work clothing and equipment must be worn when the exposure to H₂S and H₂S compounds is above the PEL. If work clothing is provided, it will be given to you in a clean and dry condition. Protective work clothing and equipment can include coveralls, Tyvek coveralls, gloves, hats, shoes, shoe coverlets, and/or full face respirators. All clothing and equipment will be repaired, replaced, cleaned, laundered, or disposed of as necessary by the company. Contaminated work clothing

and equipment must be removed in the designated change room and placed in the provided closed containers to be cleaned or disposed of. At no time may H₂S be removed from protective clothing or equipment by any means which disperses H₂S into the workplace air.

35.10 Training

Employees shall receive initial and periodic refresher training on H₂S Safety based on exposure potential.

35.11 Record Retention

Documentation of training in H₂S Safety shall be kept on file.

36. LADDER SAFETY

36.1 Purpose

This procedure gives the requirements to minimize unsafe conditions involving the use of all types of ladders, e.g., step, extension, and fixed ladders.

36.2 Responsibilities

Ladder users must be able to recognize and avoid ladder hazards and be aware of safe practices in setting up, storing, moving, and working from this equipment.

36.3 References

OSHA 29 CFR §1910.26 – Portable Ladders

OSHA 29 CFR §1910.27 – Fixed Ladders

36.4 Definitions

Fixed Ladder – A ladder that cannot be easily moved or carried, and may be an integral part of a structure.

Ladder Categories:

- Type IA – 300 pounds extra heavy duty
- Type I – 250 pounds, heavy duty
- Type II – 225 pounds, medium duty
- Type III – 200 pounds, light duty

36.5 Process

36.5.1 General

All ALPHA employees who use ladders should have received Ladder Safety training.

Ladder Safety training will consist of recognition of possible hazards associated with ladder use, proper maintenance, and safety precautions to be taken when using ladders.

All ALPHA employees who use ladders must inspect them for defects or possible hazards before the ladders are used. Ladders with loose parts or faulty rungs should be taken out of service immediately. (Note: Ladders that are taken out of service should be tagged "Defective" and removed from the work area.)

Whenever possible, have someone within shouting distance while on a ladder.

36.5.2 Safe Ladder Set-Up

All ladders must be placed on firm ground.

Do not set ladders on boxes, blocks, or other objects that might move.

Do not lean or reach out while standing on ladders.

Secure ladders whenever a danger of slippage might occur.

Do not use ladders in high wind or during inclement weather conditions.

Never set up ladders in front of or around doors, unless the door is posted and/or locked.

Do not sit on ladders; place ladders on top of boxes, barrels, crates, etc.; and never use a ladder(s) in a horizontal position or as scaffolding *Note*: Ladders shall only be used for its intended purpose.

Use safety shoes or other rubber sole shoes when climbing a ladder.

Per OSHA/ANSI standards, ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced, when the ladder is in position for use.

Extension ladders shall be used at an angle (4:1 ratio); so that the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder (the distance along the ladder between the foot and the top support).

36.5.3 Climbing and Standing on Ladders Safely

Always face a ladder when climbing up or down.

Avoid carrying materials or tools when climbing a ladder. Climb the ladder first, and then pull up the materials with a rope.

Rungs and steps should be clear of grease, oil, wet paint, snow, and ice before climbing.

Do not climb onto a ladder from the side.

Do not slide down a ladder.

Climb or stand on a ladder with your feet in the center of the rung.

Do not stand on the top rung or step of a ladder.

36.5.4 Proper Use and Care of Ladders

Never use metal ladders near exposed electrical wires.

Place warning signs or setup barriers around a ladder before use.

Do not move a ladder while someone is on it.

Never use a ladder when under the influence of alcohol or prescription medications.

Do not leave tools or materials on top of ladders.

Only one person should be on a ladder at a time.

Do not use a ladder on a scaffold.

Do not try to rock a ladder to move it.

Store wood ladders where they will not be exposed to the elements.

Make sure ladders are properly secured when transported.

Do not paint wood ladders – Painting could hide potentially dangerous defects.

Remove defective ladders from service.

36.5.5 Step Ladder Safety

Never use a stepladder over 20 feet in length.

Always open a stepladder completely and make sure the spreader is locked before use.

Do not stand higher than the second step from the top of a step ladder.

Do not straddle a stepladder.

36.5.6 Extension Ladder Safety

The sections of an extension ladder should overlap enough to retain the strength of the ladder:

- Length of Ladder: Up to 36' Required Overlap: 3 Feet
- Length of Ladder: 36' to 48' Required Overlap: 4 Feet
- Length of Ladder: 48' to 60' Required Overlap: 5 Feet

Never splice or tie two short ladders together.

When using a ladder for access to a landing, it must extend 3 rungs or 3 feet above the landing.

The top of an extension ladder should rest against a flat, firm surface.

Elevate and extend these extension ladders only from the ground.

When practical, secure extension ladders at both the base and the top.

36.5.7 Extension Ladder Set-Up

Lay the ladder on the ground when it is collapsed.

Have someone foot the ladder or make sure it is braced against something.

Pick up the ladder and walk it to an upright position, making sure it will not be obstructed by trees or wires.

Slide the bottom of the ladder outwards to the proper angle and set the feet correctly.

Then extend the ladder by pulling the extension line.

Make sure the rungs on the upper half of the ladder are properly secured by the locking mechanism.

If possible, tie the ladder off or have someone steady the ladder as you climb it.

36.5.8 Fixed Ladder Safety

Fixed ladders must be secured to the object they are attached to.

Fixed ladders over 20' must have a safety cage surrounding the ladder.

The safety cage should have 15" clearance to all points from the center.

Defects in fixed ladders should be repaired as soon as possible.

When a defect is not repairable, the ladder must be taken out of service.

37. MANUAL LIFTING & BACK SAFETY

37.1 Purpose

This procedure provides the practices and/or guidelines to minimize manual lifting issues and to establish good lifting techniques when mechanical lifting devices are unavailable.

37.2 Responsibilities

The President (or designee) shall assess the operation(s) to identify where mechanical lifting could be used in place of manual lifting and provide guidelines for lifting and back safety.

Management shall provide appropriate mechanical lifting devices for material handling and lifting and ensure that each employee is properly trained and instructed on proper lifting techniques.

ALPHA employees shall use mechanical lifting devices when available and when the size, shape, and weight of the object justify their use, instead of attempting to lift the object manually. If manual lifting cannot be avoided, then use the guidelines in this document for safe lifting.

37.3 References

NIOSH – Lifting Guide for Manual Lifting

37.4 Definitions

Mechanical Lifting Devices – Devices such as cranes, chain hoists, and drum dollies that are designed specifically for lifting objects. Mechanical lifting devices are used to minimize risk of injury associated with manual lifting.

37.5 Process

37.5.1 Preventing Back Injuries

Most back injuries are a result of years of improper lifting practices, or of lifting objects that are too heavy and should have been lifted with a mechanical device. It is this cumulative trauma to the back that weakens it and eventually causes a back injury such as a muscle pull, slipped disc, or back pain that seems to develop suddenly after periods of heavy exertion.

The key to preventing back injuries is to lift objects manually only as a last option. Also, when manual lifting is required, follow proper lifting techniques and get help when lifting heavy objects.

37.5.2 Manual Lifting Techniques

37.5.2.1 Planning

Planning for a manual lift includes:

- Lift the corner of the load to check its weight and stability; use mechanical assistance or get help if needed
- Inspect the area around the object to be lifted
- Scan expected transportation routes for any obstruction or spillage
- Inspect the object for burrs, jagged edges, rough, or slippery surfaces
- Wipe off greasy, wet, slippery, or dirty objects
- Keep your hands free of oil and grease
- Wear tight gloves and safety shoes with reinforced steel toes and nonskid soles, preferably with a defined heel
- Keep your fingers away from pinch points, especially when setting objects down

37.5.2.2 Proper Lifting

Proper lifting techniques include:

- Never lift a load beyond your capacity
- Test the load weight by lifting one edge or end of the load; if it is too heavy, use mechanical assistance or get help
- Stand close to the load with your feet firm on the floor and at shoulder width, toes pointing out
- Squat close to the load, with your back straight and knees bent
- Tuck your chin in
- Grip the object with your whole hand

- Place your hands on diagonally opposite corners so one hand pulls toward you as the other one lifts
- Bring the load as close as possible to your body
- Keep your weight centered over your feet, tuck your elbows and arms in close to your body
- Lift with your legs, not your back
- Lift gradually and smoothly, head and shoulders first
- Keep your back straight, letting your legs push your body up smoothly

37.5.2.3 Proper Carrying

Proper carrying techniques include:

- Keep a good grip on the load and keep your eyes on the route
- Move slowly with small steps
- Keep the load close to your body and no more than waist high
- Change direction by moving your feet, not by twisting

37.2.4 Proper Unloading

Proper unloading techniques include:

- At the unloading spot, lower the object slowly
- Bend your knees; let your legs do the work
- Don't catch your fingers under the load
- Place the load carefully on a surface edge, then slide it into place

37.5.2.5 Proper Team Lift & Carrying

Proper team lift and carrying techniques include:

- One-person gives orders to lift, turn, and set down
- Everyone lifts and moves together
- Everyone should understand what to do before beginning the lift
- Adjust the load to equalize the portion that each person carries
- Lift and lower in the same manner: Squat down close to the load; get a firm grip; keep your back straight; lift slowly with your leg power
- For setting down, reverse the procedure
- Take care to keep your fingers and hands from being caught underneath
- Keep the load level and the weight evenly distributed
- Be especially careful when you are going up and down inclines
- Carry the load without sudden starts or stops
- Move slowly and watch where you step

- Walk in step
- Avoid stairs whenever possible
- Use an elevator or hoist to move loads to different floor levels
- Long loads should be carried on the same shoulder of each team
- Member
 - If the object is rigid, all should walk in step
 - Walking out of step will keep flexible objects from bouncing
- Avoid walking backwards
 - If necessary, be sure the path is clear and have someone guide you
- If more than two people carry an object, a supervisor should direct the work to ensure simultaneous action

37.5.3 Special Situation Lifting Techniques

Awkward shapes – Squat, feet spread, next to object, grip the top outside corner and the bottom inside corner and follow standard lifting procedures. For boxes and cartons, grasp the alternate top and bottom corners and draw a corner between your legs.

Sacked materials – Grasp at opposite corners. Stand to an erect position, letting the sack rest against your hip and stomach. Next, swing the sack to one shoulder, stoop slightly and put one hand on your hip, so that the sack rests partly on your shoulder and partly on your arm and back. To lower, swing the sack slowly from your shoulder until it rests against your hip and stomach. Then bend your legs and lower the sack, keeping your back straight.

Drums – To lift or lower the drum from an upright position, the use of a drum lifter is recommended. Team lifting can also be used. To move an individual filled drum, a drum dolly is to be used. To roll an empty drum, grasp the chime with both hands, lean the drum slightly inward and roll it slowly on the bottom chime, rotating your hands as the drum rolls. To change direction, return the drum to an upright position. Facing the new direction, reposition your hands and begin the roll procedure again. Various other shapes, sizes and weights of objects will be encountered, such as pipes, subs, bits, logging tools, etc. In these cases, mechanical lifting devices and/or teamwork should be employed as much as possible. An individual, manual lift should be done according to the safe lifting rules described above.

Awkward locations – Get as close as possible to the object; with your back straight, stomach muscles tight, and bending slightly forward at your hips, bend your knees, grip the object, and use your leg, stomach, and buttock muscles to lift.

High Places – Use a sturdy ladder and a helper. To remove the object, push on it to check weight and stability. Slide the object as close as possible to your body, grip firmly, and slide down. To place the object, lift it waist high and rest its edge on a lower shelf or your hip. Bend your knees and lift; then straighten out once the object is lifted.

Two-person lift – Best to work with a person of about one’s same height. Designate one person be responsible for giving signals. At the signal, lift and rise together. Keep the load at the same level and move together to carry and unload, using correct lifting techniques.

Material-handling equipment – Always keep a firm grip on the equipment and the load close to your body. With your back straight and knees bent, lean in the direction you’re going; let legs and body do work and push rather than pull.

Note: Leaning over handrails or into boxes or workbaskets to lift a load (regardless of size or weight) can be hazardous. Avoid bending over handrails or into boxes or workbaskets. Get into the basket and hand material out when doing so does not create additional hazards (i.e., falls, caught between, crushing) or use mechanical help. When leaning over is the only option, do not lift any heavy objects. Lean over into the basket/box with one leg placed firmly on the ground while the other leg is fully extended to the rear. One hand should be used for the lift and the other placed on the box or basket for balance.

37.5.4 Minimize Lifting Strains

Common practices include:

- Use mechanical equipment when possible
- Don’t take on more than you can carry
- Break a large load into several small ones
- Push, don’t pull, heavy objects
- Don’t lift heavy objects above your waist level
- Warm up with gentle bends or stretches before you lift.
- Exercise (after consulting with doctor)
- Maintain a proper diet and body weight as prescribed by your physician
- Sit straight, back against chair back, feet on floor
- Stand straight, head up, chin tucked in, buttocks tucked under
- Whether sitting or standing, shift positions regularly
- Don’t cradle the telephone between your head and shoulder
- Try not to bend or twist
- Drive with your back straight against the seat, knees bent
- Sleep on a firm mattress, preferably on your right side with your knees bent, or on your back with a pillow under your knees.
- Shovel with your hands far apart, knees bent, and back straight; lift with your legs
- Don’t jump from platforms
- Notify your supervisor immediately if you experience back pain

37.5.5 Repetitive Lifting

Cutting down on the number of times the same material is handled will reduce both the exposure to possible injury and the physical effort required. Frequent movement of the same types of material over the same routes suggests the use of mechanization, particularly where there is manual handling of heavy or bulky objects. Heavy objects that must be lifted repetitively should be stored at waist height. A realignment of the work method or work schedule could reduce the total weight and/or the frequency of repetitive lifts. Reducing the weight to be lifted, the frequency of lifts, the distance the object must be lifted, and in particular, the reach-distance involved in a lift will greatly reduce the exposure to lower back injury.

37.6 Training

Employees shall receive initial and periodic refresher awareness training on proper lifting techniques and the use of lifting equipment.

37.7 Record Retention

Documentation of training in the use of proper manual lifting techniques and back safety shall be kept on file.

38. PERMIT TO WORK

38.1 Purpose

The purpose of this procedure is to protect the health and safety of all persons working at a worksite. Permitted work will not be started without attaining the proper permits. Permits are used to facilitate communication between operations and maintenance representatives, to define the scope-of-work, to identify potential hazards and the required protective systems, and to identify any additional checklist and forms that may be required prior to work being performed.

38.2 Scope

An applicable work permit is required for anyone involved in performing maintenance or inspection activities. All ALPHA employees will follow the Owner Client site specific safe work practices and work permit systems.

38.3 General Requirements

38.3.1 Authorizing Work

Only Owner Client representatives or their designees can authorize work.

38.3.2 Requesting a Work Permit

Before starting work, the group performing maintenance will provide the operations representative with the defined scope of work for the job when requesting a permit.

An owner client representative must review the information provided, survey the job site, and complete the applicable permit.

Prior to the initial start of the job, both groups must review the applicable permit with an operations representative to ensure a clear and complete understanding of the potential hazards, the required work permits, and the required protective systems.

An Owner Client representative will review and authorize the work by signing in the appropriate section of each permit.

38.3.3 Posting the Work Permit

Once the hardcopy of the work permit has been posted, work can start.

38.4 General Information and Training

All ALPHA must receive initial training as it relates to their duties for work permitting.

All training must be documented.

Training records will be maintained by the HR Department in the employee training files.

38.5 General Responsibilities

The President (or designee) will be responsible for scheduling all ALPHA employees to take ALPHA safety orientation and other required training prior to assignment to an owner client worksite.

Company Representatives are responsible for evaluating the Owner Client safe work practices and Work Permit Systems to ensure ALPHA personnel are trained as part of their initial site orientation.

39. PERSONAL PROTECTIVE EQUIPMENT

39.1 Purpose

The purpose of this written program is to protect employees from hazards by the use of Personal Protective equipment. This procedure does not cover respiratory protection, hearing conservation, bloodborne pathogens, electrical protective devices or tuberculosis.

39.2 References

OSHA 29 CFR §1910.132 – General Requirements

OSHA 29 CFR §1910.133 – Eye and Face Protection

OSHA 29 CFR §1910.135 – Head Protection

OSHA 29 CFR §1910.136 – Foot Protection

OSHA 29 CFR §1910.138 – Hand protection

39.3 Scope

Protective equipment, including personal protective equipment for eyes, face, head and extremities, protective clothing and protective shields and barriers, shall be provided at no cost to the employee, used, and maintained in sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

Design – All personal protective equipment shall be of safe design and construction for the work to be performed.

Hazard Assessment – The employer shall assess the workplace to determine if hazards are present, or likely to be present, which necessitate the use of personal protective equipment.

Training – The employer must provide employees with training on the proper use, maintenance, limitations and storage of PPE.

39.4 Hazard Assessment

The OSHA Personal Protective Equipment Standard requires that each employer must perform a hazard assessment of the workplace to determine if hazards are present, or are likely to be present, which require the use of personal protective equipment (PPE). If such hazards are present, or likely to be present, the employer shall:

- Select, provide and require the use of appropriate PPE for each affected employee
- Communicate PPE selection decisions to each affected employee
- Select and provide PPE that properly fits each affected employee
- Conduct and document appropriate employee training

To access the need for PPE, a survey of the workplace must be conducted. The assessment must match the PPE to the particular hazard. The following is a recommended procedure for conducting a hazard assessment.

39.4.1 Review Injury and Accident Data:

Two sources of injury data can provide helpful information for assessing hazards:

- OSHA Form 300 Log
- Worker's Compensation Claims

39.4.2 Inform Employees and Supervisors of the Process

Involve the employees and supervisors from each work area that is being assessed. Review the job procedures, potential hazards and the PPE currently in use. Discuss the reasons for the survey and the procedures being used for the assessment. Point out that the assessment is not a review of their job performance.

39.4.3 Conduct a Walk-Through Survey

Conduct a walk-through survey of the work areas that may need PPE. The purpose of the survey is to identify sources of hazards to workers and co-workers. Observe the following: layout of the workplace, location of the workers, work operations, hazards and places where PPE is currently used including the device and reason for use.

Consideration should be given to the following basic hazard categories:

- Impact (falling/flying objects)
- Penetration (sharp objects piercing foot/hand)
- Compression (roll-over or pinching objects)
- Chemical exposure (inhalation, ingestion, skin contact, eye contact or injection)
- Heat
- Dust
- Light (optical) radiation (welding, brazing, cutting, furnaces, etc.)
- Respiratory System
- Extreme Cold
- Noise
- Vibration
- Electrical

39.4.4 Organize the Data

Following the walk-through survey, organize the data and information for use in the hazard assessment. The objective is to prepare for an analysis of the hazards in the environment to enable proper selection of PPE.

39.4.5 Analyze the Data

Having gathered and organized the data, an estimate of the potential for injuries and illnesses should be made. Each of the basic hazards should be reviewed (see walk-through survey) and determination made as to the type, level of risk and seriousness of potential injury from each of the hazards found in the area. The possibility of exposure to several hazards simultaneously should be considered.

39.4.6 PPE Determination

Each of the basic hazards should be reviewed and a determination made as to the type, level of risk, and seriousness of potential injury. Consideration should be given to the possibility of exposure to several hazards at once. The general procedure for determining appropriate protective equipment is to:

- Identify the potential hazard(s) and the type of protective equipment that is available, and what protection it provides (i.e., splash protection, impact protection, etc.)
- Compare the capabilities of various types of PPE with the hazards associated with the environment (e.g., impact velocities, masses, projectile shape, and radiation intensities)
- Select the PPE which provides a level of protection greater than the minimum required to protect employees from the hazard(s)
- Select PPE that will fit each employee properly and provides protection from the hazard(s) **Note:** Employee owned PPE is not allowed without inspection and consent of the ALPHA President and/or designee.

39.4.7 Selection Guidelines

After completion of the hazard assessment, the process for the selection of PPE is to:

- Become familiar with the potential hazard(s) and what PPE is available and what it can do (splash protection, impact protection, etc.) to prevent injuries and illnesses
- Compare the hazard(s) associated with the work environment and the capabilities of the available PPE (such as shaded lenses for welding or flying objects during a grinding operation)

- Select the PPE which ensures a level of protection greater than the minimum required to protect employees from the hazard(s)
- Fit the user with the device and provide instruction on care, use, and limitations of PPE

Note: Personal protective equipment alone should not be relied upon to provide protection against hazards but should be used in conjunction with engineering controls, administrative controls, and procedural controls.

39.4.8 Fitting the Device

Careful consideration must be given to comfort and fit. The right size should be selected to encourage continued use of the device.

Adjustments should be made on an individual basis for a comfortable fit while still maintaining the PPE in proper position.

In addition, proper fitting of hard hats is important to ensure that the hard hat will not fall off during work operations. In some cases a chin strap may be necessary to keep the hard hat on an employee's head. (Chin straps should break at a reasonably low force to prevent a strangulation hazard). Where manufacturer's instructions are available, they should be followed carefully.

Reassess the workplace as necessary by identifying and evaluation:

- New equipment and processes
- Review accident records
- Re-evaluate the suitability of previously selected PPE

39.5 Employee Training

All employees who are required to use PPE will be provided training in the proper use. Employees will receive training upon initial assignment and whenever changes are made in the program or type of PPE required. At a minimum, each employee using PPE must know:

- When PPE is necessary
- What PPE is necessary and Which PPE has been selected for each process the employee operates
- How to properly put on, take off, adjust, and wear PPE
- The limitations of the PPE
- How to determine if PPE is no longer effective and/or is damaged
- How to get replacement PPE
- How to properly care for, maintain, store, and dispose of PPE

After employees have been trained, periodic assessment of the process/equipment should be conducted to ensure that the PPE is adequate and training is appropriate.

Retraining of employees is required whenever:

- Changes in the workplace render the previous training obsolete
- Changes in the type of PPE render previous training obsolete
- Employer observed inadequacies in an employees' knowledge or use of assigned PPE indicates that an employee has not retained the necessary understanding or skill

39.6 Cleaning and Maintenance

All PPE must be kept clean and properly maintained. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision. All PPE should be cleaned, inspected and maintained at regular intervals so that PPE can provide the requisite protection. Contaminated PPE which cannot be decontaminated must be disposed of in a manner that protects employees from exposure to hazards.

Damaged and/or defective PPE is not to be used by the employee, shall be properly discarded, and notification made to his/her supervisor for replacement.

39.7 Hazard Assessment Certification

Each PPE assessment must be documented by the issuance of a written Hazard Assessment Certification. This document must:

- Identify the workplace evaluated
- Name the individual who conducted the evaluation
- Give the date of the hazard assessment
- Identify the document as a certification of hazard assessment

39.8 PPE Selection Charts

39.8.1 Eye and Face Protection Chart

Refer to the Eye and Face Protection Chart for guidance on the proper selection of PPE for eye and face protection.

Employees must use appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids, or caustic liquids, chemical gases or vapors, or potentially injurious light radiation. Requirements for side protection, prescription lenses, filter lenses, and identification of the manufacturer are outlined in the standard.

The (designated position) should make sure those employees who wear prescription lenses while engaged in operations that involve eye hazards wear eye protection that incorporates the prescription in the design, or wear eye protection that can be worn over the prescription lenses without disturbing the proper positioning of the prescription lenses or the protective lenses.

Protective eye and face devices must comply with ANSI Z87.1-2010 or be demonstrated to be equally effective.

Occupations for which eye and face protection should be routinely considered are: carpenters, electricians, machinists, lathe operators, mechanics, plumbers, pipe fitters, sheet metal workers, assemblers, foundry workers, machine operators, welders, laborers and timber cutting and logging operators.

39.8.2 Head Protection Chart

Refer to the Head Protection Chart for guidance on proper selection of PPE for head protection.

Employees must wear protective helmets when working in areas where there is a potential for injury to the head from falling objects. Protective helmets designed to reduce electrical shock hazards shall be worn by each such affected employee when near exposed electrical conductors which could contact the head. Protective helmets shall comply with ANSI Z89.1-2009 or be equally effective.

Some examples of the occupations for which head protection should be routinely considered are: carpenters, electricians, mechanics, plumbers, pipe fitters, packers, welders, laborers, freight handlers, timber cutting, logging, stock handlers, warehouse laborers, etc.

39.8.3 Foot Protection Chart

Refer to the Foot Protection Chart for guidance on proper selection of PPE for foot protection.

Employees must wear protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, or where employees' feet are exposed to electrical hazards. Protective footwear must comply with ANSI Z41-1999 or be equally effective.

Some examples of the occupations for which foot protection should routinely considered are: shipping and receiving clerks, stock clerks, carpenters, electricians, machinists, mechanics, plumbers, welders, pipe fitters, gardeners, groundskeepers, etc.

39.8.4 Hand Protection Chart

Employers must select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns and harmful temperature extremes. No one type or style of glove can provide protection against ALL potential hand hazards. Employers shall base the selection of the appropriate hand protection on evaluation of the performance characteristics of the hand protection relative to the tasks to be performed, conditions present, duration of use and the hazards and potential hazards identified. It is important to determine the performance characteristics of gloves relative to the specific hazard, how long the glove can be worn, and whether it can be reused. Documentation from the manufacturer should be requested.

Occupations/activities that may be exposed to these types of hazards include sheet metal fabrication, painters, welders, electricians, parts cleaning and food.

The work activities of the employee should be analyzed to determine the degree of dexterity required, the duration, frequency, degree of exposure, and physical stresses that will be applied.

Consider the following factors for glove selection for chemical hazards:

- Toxic properties of the chemical must be determined in relation to skin absorption
- MSDS's are an excellent source of information
- For mixtures and formulated chemicals, a glove selected on the basis of the chemical component with the shortest breakthrough time
- Employees must be able to remove the gloves in such a manner as to prevent skin contamination

39.8.5 Upper/Lower Body Protection Chart

Refer to the Upper/Lower Body Protection Chart for guidance on the proper selection of PPE for upper or lower body protection.

Some occupations for which body protection should be routinely considered include lab technicians and researchers, fire control, highway construction, welders, timber cutting, etc.

39.9 Attachments

- 39.9.1 Eye and Face Protection Selection
- 39.9.2 Head Protection Chart

- 39.9.3 Foot Protection Chart
- 39.9.4 PPE Hazard Assessment
- 39.9.5 PPE Site Compliance Checklist
- 39.9.6 PPE Training Certification Record
- 39.9.7 PPE Hazard Assessment Certification
- 39.9.8 PPE Audit Checklist
- 39.9.9 PPE Hazard Assessment & Survey Analysis

Note: All PPE-related attachments are located on our website and available for download and use.

39.9.1 Eye and Face Protection Selection

The following chart shows some common workplace activities performed by state employees and the proper eye and face protection equipment needed for each activity. Contact your supervisor and/or safety coordinator for more information about the selection of eye and face protection for these and other work activities.

<u>ACTIVITY</u>	<u>EYE/FACE HAZARDS</u>	<u>EYE/FACE PROTECTION</u>
Acetylene welding	Sparks, optical radiation, flying particles	Welding goggles or welding helmet worn over safety glasses with side shields.
Chemical handling, laboratory operations	Chemical splash or spill, acid burns, fumes, glass breakage	Chemical goggles. Use a face shield plus chemical goggles for severe exposure.
Cutting, brazing, Soldering	Sparks, optical radiation, flying particles, flash burns	Safety glasses with shaded lenses or welding shield. Use face shield plus safety glasses for severe exposure.
Electric arc welding	Sparks, optical radiation, flying particles	Welding shield or welding helmet worn over safety glasses with side shields.
Grinding, sawing	Flying particles, dust	Impact goggles or safety glasses with side shields. Use a face shield plus impact goggles or safety glasses for severe exposure.
Laser operations	Reflected or direct laser beam impact	Narrow or broad spectrum laser spectacles or goggles. Selection is based on type of laser.
Machining	Flying particles, mists, vapors	Safety glasses with side shields or goggles.
Medical examinations, First Aid procedures	Contact with body fluids/bloodborne pathogens	Safety glasses with solid side shields. Use safety goggles or face shield plus goggles for severe exposure.
Pesticide/fertilizer application with hand sprayer	Chemical splash or spill, airborne chemicals	Chemical goggles or safety glasses. Use face shield plus safety glasses/goggles for severe exposure.

Notes to Eye and Face Protection Selection Chart:

- a) Care should be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards should be provided. Protective devices do not provide unlimited protection.
- b) Operations involving heat may also involve light radiation. As required by the standard, protection from both hazards must be provided.
- c) Face shields should only be worn over primary eye protection (spectacles or goggles).
- d) As required by the standard, filter lenses must meet the requirements for shade designations in Sec. 1915.153(a)(4). Tinted and shaded lenses are not filter lenses unless they are marked or identified as such.
- e) As required by the standard, persons whose vision requires the use of prescription (Rx) lenses must wear either protective devices fitted with prescription (Rx) lenses or protective devices designed to be worn over regular prescription (Rx) eye wear.
- f) Wearers of contact lenses must also wear appropriate eye and face protection devices in a hazardous environment. It should be recognized that dusty and/or chemical environments may represent an additional hazard to contact lens wearers.
- g) Caution should be exercised in the use of metal frame protective devices in electrical hazard areas.
- h) Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleansing may be necessary.
- i) Welding helmets or face shields should be used only over primary eye protection (spectacles or goggles).
- j) Non-side shield spectacles are available for frontal protection only, but are not acceptable eye protection for the sources and operations listed for "impact."
- k) Ventilation should be adequate, but well protected from splash entry. Eye and face protection should be designed and used so that it provides both adequate ventilation and protects the wearer from splash entry.
- l) Protection from light radiation is directly related to filter lens density. See note (d). Select the darkest shade that allows task performance

39.9.2 Head Protection Chart

HEAD PROTECTION CHART

Source	Assessment of Hazard	Protection
Impact	Falling objects	Hard Hat. Specify type. (See ANSI performance requirements)
	Collision with fixed object	Hard Hat. (See ANSI performance requirements)
Electrical	Contact with exposed electrical wires, conductors	Class A or Class B Hard Hat, depending upon exposure. (See ANSI performance requirements)

**AMERICAN NATIONAL STANDARDS INSTITUTE
(ANSI) PERFORMANCE REQUIREMENTS
FOR OCCUPATIONAL HEAD PROTECTION**

	Class A	Class B	Class C
Description	General service, limited voltage protection	Utility service, high voltage protection	General service, metallic, no voltage protection
Material	Water resistant, slow burning	Water resistant, slow burning	Water resistant, slow burning
Insulation Resistance	2200V, 60Hz for 1 min. with 3 mA max. leakage	20,000V, 60Hz for 3 min. with 9 MA max. leakage	N/A
Flammability	3 in/min max	3 in/min. max	N/A
Impact Resistance (Transmitted Force)	850 lb. average 1000 lb. maximum	850 lb. average 1000 lb. maximum	850 lb. average 1000 lb. maximum
Penetration Resistance	3/8 in maximum	3/8 in maximum	7/16 in maximum
Standard	Z89.1-1969	Z89.2-1971	Z89.1-1969

Selection guidelines for head protection:

- a) Hard hats are designed to provide protection from impact and penetration hazards caused by falling objects. Head protection is also available which provides protection from electric shock and burn. When selecting head protection, knowledge of potential electrical hazards is important. Class A helmets, in addition to impact and penetration resistance, provide electrical protection from low-voltage conductors. (They are proof tested to 2,200 volts.) Class B helmets in addition to impact and penetration resistance provide electrical protection from high-voltage conductors. (They are proof tested to 20,000 volts.) Class C helmets

provide impact and penetration resistance. (They are usually made of aluminum, which conducts electricity and should not be used around electrical hazards.)

- b) Where falling object hazards are present, head protection must be worn. Some examples of exposure include: working below other workers who are using tools and materials which could fall; working around or under conveyor belts which are carrying parts or materials; working below machinery or processes which might cause material or objects to fall; and working on exposed energized conductors.
- c) Examples of occupations for which head protection should be considered are: carpenters, electricians, machinists, boilermakers, erectors, plumbers, coppermiths, ship fitters, welders, laborers and material handlers.

39.9.3 Foot Protection Chart

FOOT PROTECTION CHART

Source	Assessment of Hazard	Protection
Impact	Falling objects, parts, heavy tools	Safety shoes. For severe exposure use metatarsal guards (See ANSI performance requirement)
Penetration	Nails, scrap metal, and other sharp objects	Footwear with puncture-resistant soles/steel insert
Compression	Rolling or pinching objects, rolls, carts or vehicles	Safety shoes. For severe exposure use metatarsal guards (See ANSI performance requirement)
Chemicals	Splashing/spilling liquids, i.e., solvents, oils, paints, corrosives, acids, etc.	Leather shoes for mild exposures. Rubber boots or shoes with spats for severe exposure
Electrical	Contact with power lines, conductors, arcing, sparks or static discharges.	Footwear with special conductive/insulated soles
Heat	Splash from molten metal	Safety shoes with metatarsal guards or spats
	Flying sparks, flux, and metal from cutting/welding operations	Leather safety shoes. For severe exposure, use metatarsal guards or spats.
Water	Wetness/moisture from prolonged exposure	Insulated shoes or boots
	Slipping hazard	Footwear with slip-resistant soles
Temperature	Exposure to extreme cold	Insulated shoes/boots

ANSI PERFORMANCE REQUIREMENTS FOR OCCUPATIONAL FOOT PROTECTION

Class	Compression Resistance (pounds)	Impact Resistance (foot-pounds)
75	2,500	75
50	1,750	50
30	1,000	30

Selection guidelines for foot protection:

- a) Safety shoes and boots must meet ANSI Z41-2010 and provide impact and compression protection to the foot. Where necessary, safety shoes can be obtained which provide puncture protection. In some work situations, metatarsal protection should be provided, and in some other special situations electrical conductive or insulating safety shoes would be appropriate.
- b) Safety shoes or boots with impact protection would be required for carrying or handling materials such as packages, objects, parts or heavy tools, which could be dropped, and for other activities where objects might fall onto the feet. Safety shoes or boots with compression protection would be required for work activities involving skid trucks (manual material handling carts) around bulk rolls (such as paper rolls) and around heavy pipes, all of which could potentially roll over an employees' feet. Safety shoes or boots with puncture protection would be required where sharp objects such as nails, wire, tacks, screws, large staples, scrap metal etc., could be stepped on by employees, causing an injury.
- c) Some occupations (not a complete list) for which foot protection should be routinely considered are: shipping and receiving clerks, stock clerks, carpenters, electricians, machinists, boiler makers, plumbers, copper smiths, pipe fitters, ship fitters, burners, chippers and grinders, erectors, press operators, welders, laborers, and material handlers.

39.9.4 PPE Hazard Assessment

<p>PERSONAL PROTECTIVE EQUIPMENT HAZARD ASSESSMENT Permission to use this assessment form is granted to the Bureau of State Risk Management by Coastal Training Technologies.</p>	
Organization: _____	
Location: _____	
Operation/Process: _____	
Job Classification(s) Assessed: _____	
The following hazards have been noted:	
<input type="checkbox"/> Impact <input type="checkbox"/> Falling Objects <input type="checkbox"/> Moving Vehicles <input type="checkbox"/> Flying objects <input type="checkbox"/> Overhead projections <input type="checkbox"/> Other:	<i>Notes:</i>
<input type="checkbox"/> Penetration <input type="checkbox"/> Sharp/piercing objects	<i>Notes:</i>

<input type="checkbox"/> Compression (roll-over) <input type="checkbox"/> Rolling or pinching objects	<i>Notes:</i>			
<input type="checkbox"/> Chemical <input type="checkbox"/> Inhalation <input type="checkbox"/> Injection <input type="checkbox"/> Splash <input type="checkbox"/> Ingestion <input type="checkbox"/> Absorption	<i>Notes:</i>			
<input type="checkbox"/> Heat <input type="checkbox"/> Hot metal <input type="checkbox"/> Hot sparks <input type="checkbox"/> Ignition of clothing/PPE	<i>Notes:</i>			
<input type="checkbox"/> Light (optical) Radiation <input type="checkbox"/> Welding <input type="checkbox"/> Cutting <input type="checkbox"/> Furnace <input type="checkbox"/> Lasers <input type="checkbox"/> Brazing <input type="checkbox"/> Heat Treating	<i>Notes:</i>			
<input type="checkbox"/> Dust <input type="checkbox"/> Grinding <input type="checkbox"/> Sawing <input type="checkbox"/> Sanding <input type="checkbox"/> General dusty conditions	<i>Notes:</i>			
<input type="checkbox"/> Electrical	<i>Notes:</i>			
<input type="checkbox"/> Extreme Cold	<i>Notes:</i>			
<input type="checkbox"/> Noise	<i>Notes:</i>			
<input type="checkbox"/> Respiratory System	<i>Notes:</i>			
<input type="checkbox"/> Water <input type="checkbox"/> Drowning <input type="checkbox"/> Moisture/Rain	<i>Notes:</i>			
Is Personal Protective Equipment (PPE) necessary? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, list the PPE needed.				
<i>Part of Body</i>	<i>N/A</i>	<i>PPE Needed</i>	<i>PPE Needed</i>	<i>PPE Needed</i>
Eyes				
Ears				
Face				
Head				
Hands				
Body				
Feet				
Respiratory System				

CERTIFICATION: I certify that I personally performed the above Hazard Assessment on the date indicated. This document is a *Certification of the Hazard Assessment*.

Signed: _____ Date: _____

39.9.5 PPE Site Compliance Checklist

Personal Protective Equipment Site Compliance Checklist

Date: _____ **Location:** _____

Auditor: _____ **Phone #:** _____

	Yes	No	Comments
I. EYE AND FACE			
A. General Requirements.			
1. Appropriate eye and face protection must be provided when exposed to:			
a) Flying particles.			
b) Molten metal.			
c) Liquid chemicals.			
d) Acids or caustic liquids.			
e) Chemical gases.			
f) Vapors.			
g) Potential injurious light radiation.			
2. Side shields required – flying objects.			
3. Prescription safety glasses or safety glasses over prescription lenses.			
4. Marked with the identification of the manufacturer.			
5. Injurious light radiation – filter lenses with the shade number appropriate for the work.			
B. Criteria for protective eye and face devices.			
1. Protective eye/face must comply with ANSI Z87.1 /2010.			
II. HEAD PROTECTION			
A. General Requirements.			
1. Helmets are worn when working in areas where there is a potential for injury from falling objects.			
2. Helmets designed to reduce electrical shock hazards (Class A or B) when near exposed electrical conductors.			
B. Criteria for protective helmets.			
1. Helmets must comply with ANSI Z89.1 – 2009.			
III. FOOT PROTECTION			
C. General Requirements.			
1. Protective footwear must be worn in areas where:			
a) Falling and rolling objects.			
b) Objects piercing the sole.			
c) Where exposed to electrical hazards.			
D. Criteria for Protective Footwear.			
1. Protective footwear must comply with ANSI Z41 – 1999.			

IV. HAND PROTECTION			
E. General Requirements.			
1. Select and require employees to use appropriate hand protection when exposed to the following:			
a) Skin absorption of harmful substances.			
b) Severe cuts/lacerations.			
c) Severe abrasions.			
d) Punctures.			
e) Thermal & chemical burns.			
f) Temperature extremes.			
B. Selection.			
1. Selection of the appropriate hand protection is based on an evaluation of the performance characteristics of the hand relative to the following:			
a) The task being performed.			
b) Conditions present.			
c) Duration of use.			
d) Hazards and potential hazards identified.			
2. MSDS consulted for chemicals.			
V. HAZARD ASSESSMENT			
F. Review Injury and Accident Data.			
1. OSHA Form 200 Log.			
2. Worker's Compensation Claims.			
G. Inform employees and supervisors of the process.			
1. Involve the employees and supervisors from each work area being assessed.			
2. Review job procedures.			
3. Potential hazards.			
4. PPE currently in use.			
H. Conducted a Walk-Through Survey observing the following:			
1. Layout of the workplace.			
2. Location of the workers.			
3. Work operations.			
4. Hazards and places where PPE is currently used including the reason for use.			
I. Consider the following hazard categories:			
1. Impact (falling/flying objects).			
2. Penetration (sharp objects piercing foot/hand).			
3. Compression -rollover/ pinching			
4. Chemical exposure (inhalation, ingestion, skin contact, eye contact or injection).			
5. Heat.			
6. Dust.			
7. Light (optical) radiation (welding, brazing, cutting, furnaces, etc.).			
8. Extreme cold.			
9. Water (potential for drowning or fungal infections caused by wetness).			
10. Vibration.			

11. Electrical.			
J. Organize Data.			
1. Prepare data for analysis of the hazards in the environment to enable proper selection of PPE. (This could be by job, function or department).			
K. Analyze Data.			
1. Estimate the potential for injuries and illnesses.			
2. Review and determine each basic hazard as to:			
a) Type.			
b) Level of risk.			
c) Seriousness of potential injury from each of the hazards.			
3. Possibility of exposure to several hazards simultaneously.			
L. Selection Guidelines.			
1. Become familiar with the potential hazards, what PPE is available and what PPE can do to prevent injuries and illnesses.			
2. Compare the hazards associated with the work environment and the capabilities of the available PPE.			
3. Select the PPE that ensures a level of protection greater than the minimum required to protect employees.			
M. Fitting the Device.			
1. Selected the right size.			
2. Adjusted for comfortable fit while maintaining the PPE in proper position.			
N. Reassessment of the hazards.			
1. Assess the workplace as necessary by identifying and evaluating:			
a) New equipment and processes.			
b) Review of accident records.			
c) Re-evaluate the suitability of previously selected PPE.			
VI. TRAINING			
O. Each employee who is required to use/wear PPE must be trained to know the following:			
1. What PPE is necessary.			
2. When PPE is necessary.			
3. How to properly don, doff, adjust and wear PPE.			
4. Limitations of the PPE.			
5. Proper care, maintenance, useful life and disposal of PPE.			
B. Employee must demonstrate an understanding of the training elements taught and the ability to use PPE properly before being allowed to perform work requiring PPE.			
A. Retraining must be done in the following situations:			

39.9.8 PPE Audit Checklist

Personal Protective Equipment Audit Checklist

	Yes	No
Are employers assessing the workplace to determine if hazards that require the use of personal protective equipment (for example, head, eye, face, hand, or foot protection) are present or are likely to be present?		
If hazards or the likelihood of hazards are found, are employers selecting and having affected employees use properly fitted personal protective equipment suitable for protection from these hazards?		
Has the employee been trained on PPE procedures that are necessary for a job task, when they need it, and how to properly adjust it?		
Are protective goggles or face shields provided and worn where there is any danger of flying particles or corrosive materials?		
Are approved safety glasses required to be worn at all times in areas where there is a risk of eye injuries such as punctures, abrasions, contusions or burns?		
Are employees who need corrective lenses (glasses or contacts) in working environments having harmful exposures, required to wear only approved safety glasses, protective goggles, or use other medically approved precautionary procedures?		
Are protective gloves, aprons, shields, or other means provided and required where employees could be cut or where there is reasonably anticipated exposure to corrosive liquids, chemicals, blood, or other potentially infectious materials? See OSHA 29 CFR §1910.1030(b) for the definition of "other potentially infectious materials."		
Are hard hats provided and worn where danger of falling objects exists?		
Are hard hats inspected periodically for damage to the shell and suspension system?		
Is appropriate foot protection required where there is the risk of foot injuries from hot, corrosive, or poisonous substances, falling objects, crushing or penetrating actions?		
Are approved respirators provided for regular or emergency use where needed?		
Is all protective equipment maintained in a sanitary condition and ready for use?		
Do you have eye wash facilities and a quick drench shower within the work area where employees are exposed to injurious corrosive materials?		
Where special equipment is needed for electrical workers, is it available?		
Where food or beverages are consumed on the premises, are they consumed in areas where there is no exposure to toxic material, blood, or other potentially infectious materials?		
Is protection against the effects of occupational noise exposure provided when sound levels exceed those of the OSHA noise standard?		
Are adequate work procedures, protective clothing and equipment provided and used when cleaning up spilled toxic or otherwise hazardous materials or liquids?		

Are there appropriate procedures in place for disposing of or decontaminating personal protective equipment contaminated with, or reasonably anticipated to be contaminated with, blood or other potentially infectious materials?		
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Auditor Name: _____

Auditor Signature: _____

Date: _____

39.9.9 PPE Hazard Assessment & Survey Analysis

Personal Protective Equipment (PPE) Hazard Assessment Survey and Analysis

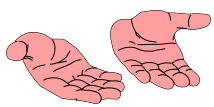

Organization: _____ Location: _____


Job Classification: _____ Operation/Process: _____

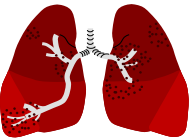



Person Performing Assessment: _____

Title: _____

THE FOLLOWING HAZARDS HAVE BEEN NOTED

Part of Body	Hazard	Required PPE	Notes
Hands 	<input type="checkbox"/> Penetration-sharp objects <input type="checkbox"/> Penetration-animal bites <input type="checkbox"/> Penetration-rough objects <input type="checkbox"/> Chemical(s) _____ <input type="checkbox"/> Extreme cold <input type="checkbox"/> Extreme heat <input type="checkbox"/> Blood <input type="checkbox"/> Electrical shock <input type="checkbox"/> Vibration-power tools <input type="checkbox"/> Other _____	<input type="checkbox"/> Leather/cut resistant gloves <input type="checkbox"/> Leather/cut resistant gloves <input type="checkbox"/> General purpose work gloves <input type="checkbox"/> Chemical resistant gloves; <input type="checkbox"/> Type _____ <input type="checkbox"/> Insulated gloves <input type="checkbox"/> Heat/flame resistant gloves <input type="checkbox"/> Latex or nitrile gloves <input type="checkbox"/> Insulated rubber gloves; <input type="checkbox"/> Type _____ <input type="checkbox"/> Cotton, leather or anti-vibration gloves <input type="checkbox"/> Other _____	
Eyes and Face 	<input type="checkbox"/> Impact-flying objects, chips, sand or dirt <input type="checkbox"/> Nuisance dust <input type="checkbox"/> UV light-welding, cutting, torch brazing or soldering <input type="checkbox"/> Chemical-splashing liquid <input type="checkbox"/> Chemical-irritating mists <input type="checkbox"/> Hot sparks-grinding <input type="checkbox"/> Splashing molten metal	<input type="checkbox"/> Safety glasses w/side shields <input type="checkbox"/> Glasses/goggles w/face shield <input type="checkbox"/> Impact goggles <input type="checkbox"/> Welding goggles <input type="checkbox"/> Welding helmet/shield w/safety glasses & side shields <input type="checkbox"/> Chemical goggles/ face shield <input type="checkbox"/> Chemical splash goggles <input type="checkbox"/> Safety glasses w/side shields <input type="checkbox"/> Glasses/goggles w/face shield	

	<input type="checkbox"/> Glare/High Intensity lights <input type="checkbox"/> Laser operations <input type="checkbox"/> Other _____	<input type="checkbox"/> Safety goggles w/face shield <input type="checkbox"/> Shaded safety glasses <input type="checkbox"/> Laser spectacles or goggles <input type="checkbox"/> Other _____	
Ears 	<input type="checkbox"/> Exposure to noise levels (> 85 dBA 8-hour TWA) <input type="checkbox"/> Exposure to sparks <input type="checkbox"/> Other _____	<input type="checkbox"/> Ear muffs, plugs or ear caps <input type="checkbox"/> Leather welding hood <input type="checkbox"/> Other _____	

Part of Body	Hazard	Required PPE	Notes
Respiratory System 	<input type="checkbox"/> Nuisance dust/mist <input type="checkbox"/> Welding fumes <input type="checkbox"/> Asbestos <input type="checkbox"/> Pesticides <input type="checkbox"/> Paint spray <input type="checkbox"/> Organic vapors <input type="checkbox"/> Acid gases <input type="checkbox"/> Oxygen deficient/toxic or IDLH atmosphere <input type="checkbox"/> Other _____	<input type="checkbox"/> Disposable dust/mist mask <input type="checkbox"/> Welding respirator <input type="checkbox"/> Respirator w/HEPA filter <input type="checkbox"/> Respirator w/pesticide cartridges <input type="checkbox"/> Respirator w/paint spray cartridges <input type="checkbox"/> Respirator w/organic cartridges <input type="checkbox"/> Respirator w/acid gas cartridges <input type="checkbox"/> SCBA or Type C airline respirator <input type="checkbox"/> Other _____	
Feet 	<input type="checkbox"/> Impact-heavy objects <input type="checkbox"/> Compression-rolling or pinching objects/vehicles <input type="checkbox"/> Slippery or wet surface <input type="checkbox"/> Penetration-sharp objects <input type="checkbox"/> Penetration-chemical <input type="checkbox"/> Splashing-chemical <input type="checkbox"/> Exposure to extreme cold <input type="checkbox"/> Other _____	<input type="checkbox"/> Steel toe safety shoes <input type="checkbox"/> Leather boots or safety shoes w/metatarsal guards <input type="checkbox"/> Slip resistant soles <input type="checkbox"/> Puncture resistant soles <input type="checkbox"/> Chemical resistant boots/covers <input type="checkbox"/> Rubber boots/closed top shoes <input type="checkbox"/> Insulated boots or shoes <input type="checkbox"/> Other _____	
Head 	<input type="checkbox"/> Struck by falling object <input type="checkbox"/> Struck against fixed object <input type="checkbox"/> Electrical-contact with exposed wires/conductors <input type="checkbox"/> Other _____	<input type="checkbox"/> Hard hat/cap <input type="checkbox"/> Class A <input type="checkbox"/> Class B <input type="checkbox"/> Class C <input type="checkbox"/> Other _____	
Body 	<input type="checkbox"/> Impact-flying objects <input type="checkbox"/> Moving vehicles <input type="checkbox"/> Penetration-sharp objects <input type="checkbox"/> Electrical-static discharge <input type="checkbox"/> Hot metal or sparks <input type="checkbox"/> Chemical(s) _____ <input type="checkbox"/> Exposure to extreme cold <input type="checkbox"/> Unprotected elevated walking/working surface <input type="checkbox"/> Other _____	<input type="checkbox"/> Long sleeves/ apron/ coat <input type="checkbox"/> Traffic vest <input type="checkbox"/> Cut-resistant sleeves, wristlets <input type="checkbox"/> Static control coats/coveralls <input type="checkbox"/> Flame-resistant jacket/ pants <input type="checkbox"/> Lab coat or apron/sleeves <input type="checkbox"/> Insulated jacket, hood <input type="checkbox"/> Body harness and lanyard <input type="checkbox"/> Other _____	

CERTIFICATION: I certify that I personally performed the above Hazard Assessment on the date indicated. *This document is a Certification of the Hazard Assessment.*

Signed by: _____ Date: _____

40. POWER TOOLS

40.1 Purpose

This procedure provides the minimum requirements to ensure the safety of ALPHA employees while using hand and power tools. Training requirements will also be described to help ensure that ALPHA employees continue to work in a safe and healthful work environment.

40.2 Scope

This procedure covers all ALPHA employees who are allowed to use hand and power (electric) tools.

40.3 References

OSHA 29 CFR §1910.241 through §1910.244

OSHA 3080 – Hand and Power Tools

OSHA 29 CFR §1910 Subpart S

NFPA 70E – 2012 Electrical Safety in the Workplace

NFPA 70 – 2012 National Electric Code

40.4 Definitions

Power Tool – a device that is powered by an external source, such as electricity or compressed air.

40.5 Responsibilities

40.5.1 President (or designee)

The President (or designee) is responsible for maintaining and updating this procedure and providing applicable training courses along with training record retention.

40.5.2 Company Representatives

Company Representatives are responsible for ensuring that:

- Employees attend training, document completion, and forward record to President (or designee)
- Hand and power tools are repaired/replaced when damaged or malfunctioning
 - **Note:** Only trained and authorized repair personnel are permitted to repair and adjust hand and power tools
- Modifications or additions, which may affect the safe use of tools, are not made without the manufacturer's prior written approval

40.5.3 Employees

Only trained, qualified, and authorized ALPHA employees will be permitted to use hand and power tools. In addition, ALPHA employees are required to:

- Complete initial and refresher Hand and Power Tool training as outlined in Section 35.7 *Training*
- Use and maintain tools in a safe manner according to his/her training
- Report all tool defects to his/her supervisor

40.6 Process

40.6.1 General Requirements

ALPHA employees that use power tools and are exposed to hazards, e.g., falling, flying, abrasive and splashing objects, or are exposed to harmful dusts, fumes, mists, vapors, or gases, must be provided with and wear personal protective equipment (PPE) necessary to protect them from the hazard.

All uses of power tools should be evaluated, so that proper PPE can be selected. Note: If not sure, consult with one's supervisor and/or the President (or designee).

40.6.2 Proper Use

Most tools have similar hazards; however, if you have any question as to the proper and safe use of a tool, consult the manufacturer's tool manual and/or a supervisor prior to use. Do not use a tool, if you are unsure how to use it in a safe manner.

The following safety rules are common to all power tools:

- Read the owner's manual to understand the tool's proper applications, limitations, operation, and hazards
- Do not use electric power tools in close proximity to flammable vapors, dusts, or construction materials
- Protect yourself from electric shock by ensuring tools are properly grounded
- Avoid using electric power tools in wet environments
- Select tool based on task it is designed
- Inspect tools for damage
- Avoid excessive force trying to make cutting tool cut faster
- Feed material at rate, which the tool is designed to accept
- Keep others away from the work area or provide/ensure wearing of PPE
- Always maintain tool control by keeping a tight grip on tool
- Always maintain balance and do not overreach
- Do not operate a power tool if you are under the influence of medications or alcohol; or if you are tired or distracted
- Secure your work in a vise or clamp for increased stability
- Equipment guards must be in place and not removed prior to and/or during use

With the additional safety concern of electrocution when using electric power tools, the following general practices should be used:

- Electric tools should be operated within their design limitations
- Gloves and safety footwear are recommended during use
- When not in use, electric tools should be stored in a dry place
- Avoid use in wet or damp locations
- Work areas should be well-lighted

40.6.3 Inspection

The user will visually inspect all power tools at the beginning of each shift to ensure that the tool(s) are in a safe and usable condition. All damaged and/or defective tools will be immediately reported to his/her supervisor, tagged, and removed from service until repair/replacement is completed.

40.6.4 Storage

When tools are not in use or will not be used within a short period of time, they should be properly stored. Guidelines for storing power tools include:

- Placing in designated storage area
- Roll up cord and inspect for damage(s)
- Store in dry location (away from dust and damp environments)

40.7 Training

ALPHA employees, who are required and authorized to use power tools, will receive initial training as required by this section, which shall be documented and available.

Employees shall be retrained and appropriate documentation completed:

- When changes in power tools render previous training obsolete
- ALPHA employee(s) is/are determined to be lacking satisfactory skills

40.8 Record Retention

Documentation of training in the use of power tools shall be kept on file in the HSE office and work site files.

41. RESPIRATORY PROGRAM

41.1 Purpose

The purpose of this Procedure is to establish the ALPHA minimum requirements for developing a Respiratory Protection Program to meet the requirements of the OSHA Respiratory Protection Standard.

41.2 References

OSHA 29 CFR Part 1910.134 Respiratory Protection Standard

ANSI Z88.2-1969 Practices for Respiratory Protection

41.3 Definitions

Approved – Tested and listed as satisfactory jointly by the Mine Safety and Health Administration (MSHA) of the U. S. Department of Labor and the National Institute for Occupational Safety and Health (NIOSH) of the U. S. Department of Health and Human Services.

Ceiling Concentration – The concentration of an airborne substance that shall not be exceeded.

Competent Person – The person designated must meet two qualifications:

1. They should have an excellent working knowledge of the Respiratory Protection Practices or methods.
2. They should have sufficient authority to promptly prevent and/or correct hazardous conditions.

Face Piece – That portion of a respirator that covers the wearer's nose and mouth in a half-mask face piece or that covers the nose, mouth, and eyes in a full-face piece. It is designed to make a gas-tight or particle-tight fit with the face and includes the headbands, exhalation valve(s), inhalation valve(s) and connections for an air-purifying device or repairable air source, or both.

Filter – A media component used in respirators to remove solid or liquid particles from the inspired air.

Hazardous Atmosphere – An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is escape unaided), injury or acute illness.

Immediately Dangerous to Life or Health (IDLH) – Any atmosphere that poses an immediate hazard to life or produces immediate irreversible debilitating effects on health.

Maximum Use Concentration (MUC) of Filter, Cartridge, or Canister – The maximum concentration of a contaminant for which an air-purifying filter, cartridge, or canister is approved for use.

Negative Pressure Respirator – A respirator in which the air pressure inside the respirator-inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.

Odor Threshold Limit – The lowest concentration of a contaminant in air that can be detected by the olfactory sense (sense of smell).

Oxygen Deficiency – The concentration of oxygen, by volume, below which atmosphere supplying respiratory protection must be provided. It exists in atmospheres where the percentage of oxygen, by volume, is less than 19.5 percent.

Permissible Exposure Limit (PEL) – OSHA's legally established time-weighted average (TWA) concentration of a contaminant that shall not be exceeded.

Respirator – a device worn over the mouth or nose for protecting the respiratory tract.

Service Life – The period of time that a respirator provides adequate protection to the wearer; for example, the period of time that an air-purifying device is effective for removing a harmful substance from inspired air.

Time-Weighted Average – the average concentration of a contaminant in air during a specific time period.

41.4 Process

41.4.1 General

Every consideration will be given to the use of effective engineering controls to eliminate or reduce exposure to respiratory hazards to the point where respirators are not required. However, when feasible engineering controls are not effective in controlling toxic substances, the company, at no charge, will provide appropriate respiratory protective equipment, medical evaluation, and training to the employee. Employees required to use respiratory protective devices because of exposure to toxic substances will do so as a condition of employment. Employees required to use respirators will be properly fitted, appropriately tested, medically screened, and thoroughly trained in their use. This training will be conducted annually and upon initial assignment.

41.4.2 Written Plan

A written Respiratory Protection Plan will be developed for the specific respiratory hazards of the project. The Owner Client will be consulted with prior to personnel being assigned to the worksite to ensure all personnel have been medically cleared and fit tested before arriving on the site if respiratory protection is required. The President (or designee) is responsible for the evaluation of the Owner Client Respiratory Program and development and implementation of the site-specific respiratory protection program.

41.4.3 Selection of respirators for routine use

Approved Respirators – Approved or authorized respirators shall be used.

Any change or modification, however minor, will void the respirator approval and significantly affect the performance of the respirator.

Selection – Respirator face piece and cartridge selection involves reviewing each operation to (A) determine what hazards may be present (hazard determination) and (B) select which type or class of respirator can offer adequate protection.

41.4.4 Purchase of Approved Equipment

These requirements apply to all NIOSH/MSHA approved respirators used on ALPHA projects. Non-approved “dust masks” may be used on ALPHA projects only after a hazard assessment has been conducted and air monitoring has shown only nuisance levels of contaminants. Such air monitoring shall be conducted by the President (or designee) or through an independent company specializing in air monitoring.

41.4.5 Comfort

Once the type of respirator that is applicable and suitable for the purpose intended has been selected, the selection process should give consideration to the fit and comfort of the respirator.

41.4.6 Medical Assessment Requirements

Prior to issuance and use of respiratory protection devices, a medical evaluation shall be offered to all affected personnel. The medical evaluation shall be under the direct supervision of a licensed physician and shall be provided at no cost to the employee and at a reasonable time and place. The licensed physician shall determine what physiological and psychological conditions are pertinent for the wearing of different types of respirators.

When applicable, medical surveillance, including bioassay, shall be carried out periodically to determine if respirator wearers are receiving adequate respiratory protection. The licensed physician shall determine the requirements of the surveillance program. The medical evaluation prior to fit-testing will be confidential, during normal working hours, convenient, understandable, and the employee will be given a chance to discuss the results with the PLHCP.

41.4.7 Medical Forms

When conducting the initial medical evaluation, the Medical Questionnaire for Respirator Use must be used.

In addition to the standardized questionnaire, the physician must also be furnished with a copy of the latest OSHA Standard governing the type of exposure to which the employee will be subjected. A description of the employee's duties as they relate to the exposure, the anticipated exposure level, a description of the respiratory protective equipment to be used, and any available information from previous medical evaluations of the employee must also be furnished to the physician on the Request for Medical Evaluation for Respirator. At the conclusion of the evaluation, the physician will submit a written opinion to the Company on the bottom of the Medical Evaluation. This will contain the results of the evaluation and any recommendations from the physician regarding the employee's limitations. The Company must furnish a copy of the physician's opinion to the employee, within thirty (30) days of its receipt by the Company.

41.4.8 Issuing Respirators

Respirators will not be fit tested or issued to individuals who have facial hair (including stubble) or any other condition, which interferes with the sealing surface of the

respirator. Respirators will not be fit tested nor issued to individuals who have not received appropriate respirator training in addition to fit testing and a medical clearance.

41.4.9 Fit-Testing Requirements

Respirators will be fitted properly and be tested for their face piece to-face seal. The two acceptable methods for conducting these tests: qualitative and quantitative fit testing.

The fit test is valid only for respirators of the same model and size tested.

Qualitative fit testing is based on the wearer's subjective response to a challenge atmosphere, of which three popular tests are:

1. Irritant Smoke Test
2. Saccharin Solution Test
3. Odorous Vapor Test

41.4.10 Fit Test Card

The respirator wearer shall be issued an employee fit test card, which includes the following information:

- Name
- Date of fit test
- Manufacturer, model, and size of each successfully tested respirator
- Name and signature of the person that conducted the test
- Fit test challenge agent used
- Fit factor, if a quantitative fit test was performed

41.4.11 Testing

The qualitative fit test should be repeated at least once every 12 months for routine use.

41.4.12 Fit Checks

There are two tests that are used in the field to check the seal of the respirator. These are known as the positive and negative fit checks. Each of these two tests must be performed every time a respirator is put on and prior to entering a contaminated area.

41.4.13 Care and Maintenance

Personnel involved in respirator maintenance must be thoroughly trained. Substitution of parts from different brands or types of respirators invalidates approval of the device.

Repairs and adjustments should never be made beyond the manufacturer's recommendations.

Cleaning the Respirator:

- Respirators must be cleaned and disinfected after each day's use
- The project shall assign specific individuals to be responsible for the cleaning and disinfecting of respirators

Note: Respirator-freshening wipes are not an adequate substitute for this cleaning and disinfecting process.

Storing the Respirator:

- When they are not being used, respirators shall be individually sealed in plastic bags and stored at locations established by company representative(s) in order to protect them against dust, sunlight, extreme temperatures, excessive moisture, or damaging chemicals.

Note: Respirators should not be stored (thrown) in toolboxes or gang boxes. They shall be stored in such a way, that the face piece and exhalation valve are not distorted.

Inspecting the Respirator:

- All respirators shall be inspected by the individual before and after each use, and at least monthly by the user's supervisor to ensure that they are in satisfactory working condition. Employees can leave the area to wash, change cartridges, or if they detect break-through or resistance at any time.

41.4.14 Work Area Surveillance

OSHA Respiratory Protection Standard, 29 CFR §1910.134 requires "appropriate surveillance." This shall include identification of the contaminant(s), nature of the hazard, concentration at the breathing zone, and, if appropriate, biological monitoring.

41.4.15 Immediately Dangerous to Life or Health (IDLH) Atmospheres

For all IDLH atmospheres, the company representative(s) shall ensure that:

- One employee or, when needed, more than one employee is located outside the IDLH atmosphere

- Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere
- The employee(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue
- The Rig Leader must be notified before the employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue
- The authorized employee, once notified, provides necessary assistance appropriate to the situation
- Employee(s) located outside the IDLH atmospheres are equipped with:
 - Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either
 - Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry; or
 - Equivalent means for rescue where retrieval equipment is not required.

41.4.16 Breathing Air Quality and Use

The Rig Leader shall ensure that compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration accords with the following specifications:

- Compressed and liquid oxygen shall meet the United States Pharmacopoeia requirements for medical or breathing oxygen; and
- Compressed breathing air shall meet at least the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-2011, to include:
 - Oxygen (O₂) content (v/v) of 19.5-23.5%
 - Water (H₂O) content (v/v) of 67 ppm or less
 - Carbon monoxide (CO) content of 10 ppm or less
 - Carbon dioxide (CO₂) content of 1,000 ppm or less
 - Lack of noticeable odor

41.4.17 Program Evaluation

The President (or designee) shall ensure that the Program is periodically evaluated to determine the effectiveness of the Respiratory Protection Program during all phases of operation in which respirators are being used.

41.5 Record Retention

Medical Records: ALPHA must retain all records pertaining to the employee's medical examination and evaluation for a period of thirty (30) years plus the duration of employment. A summary of the test results for each employee on whom a fit test was conducted, will be documented and retained as a medical record. The signed and dated Respirator Training Record will then become a part of the employees' medical records and will be retained for the same period of time as those records.

42. Scaffold Safety

42.1 Purpose

The purpose of this Procedure is to establish guidelines for the protection of ALPHA employees, who work on scaffold work surfaces.

42.2 References

29 CFR §1910.28 – Safety requirements for scaffolding

42.3 Definitions

Brace – A tie that holds one scaffold member in a fixed position with respect to another member. Brace also means a rigid type of connection holding a scaffold to a building or structure.

Coupler – A device for locking together the component tubes of a tube and coupler scaffold.

Harness – A design of straps which is secured about the employee in a manner to distribute the arresting forces over at least the thighs, shoulders, and pelvis, with provisions for attaching a lanyard, lifeline, or deceleration device.

Hoist – A mechanical device to raise or lower a suspended scaffold. It can be mechanically powered or manually operated.

Maximum Intended Load – The total load of all employee(s), equipment, tool, materials, transmitted, wind, and other loads reasonably anticipated to be applied to a scaffold or scaffold component at any one time.

Mechanically Powered Hoist – A hoist which is powered by other than human energy.

Outriggers – The structural member of a supported scaffold used to increase the base width of a scaffold in order to provide greater stability for the scaffold.

Platform – The horizontal working surface of a scaffold.

Safety Belt – A strap with means for securing about the waist or body and for attaching to a lanyard, lifeline, or deceleration device.

Scaffold – Any temporary elevated or suspended platform and its supporting structure used for supporting employees or materials or both, except this term does not include crane or derrick suspended personnel platforms.

42.4 Responsibilities

ALPHA President (or designee) will select a training facility or an in-house qualified trainer to supply the training along with record retention efforts.

ALPHA Company Representatives will identify the employees affected by this safety policy and procedure; obtain and coordinate the required training for the affected employees; and ensure compliance with this safety policy and procedure through their auditing process.

ALPHA supervisors will not allow any employee, who has not received the required training, to perform any of the tasks or activities related to scaffold erection and/or dismantling; communicate appropriate needs to management; ensure that ALPHA employees are provided with PPE as necessary for their job; and ensure that a competent person is in charge of scaffold erection according to the manufacturer's specifications.

ALPHA employees shall comply with all applicable guidelines contained in this safety policy and procedure; report damaged scaffolds, accessories, and missing or lost components; and assist with inspections as requested.

The designated competent person will oversee the scaffold selection, erection, use, movement, alteration, dismantling, maintenance, and inspection. The competent person will be knowledgeable about proper selection, care, and use of the fall protection equipment. Additionally, the competent person shall assess hazards.

42.5 Process

42.5.1 Policy

Scaffolds shall be erected, moved, dismantled, or altered only under the supervision of a competent person and will have guardrails and toe boards installed. When scaffolding hazards exist that cannot be eliminated, then engineering practices, administrative practices, safe work practices, Personal Protective Equipment (PPE), and proper training regarding scaffolds will be implemented. These measures will be implemented to minimize those hazards to ensure the safety of ALPHA employees and others.

42.5.2 Types of Scaffolds

Self-supporting scaffolds are one or more working platforms supported from below by outriggers, brackets, poles, legs, uprights, posts, frames, or similar supports. The types of self-supporting scaffolds include:

- Fabricated Frame
- Tube and Coupler
- Mobile
- Pole

Suspension scaffolds are one or more working platforms suspended by ropes or other means from an overhead structure(s). The types of suspension scaffolds include:

- Single-Point Adjustable (Boatswain's Chairs)
- Two-Point Adjustable (Swing Stage)
- Multiple-Point Adjustable
- Multi-Lend
- Category
- Float (Ship)
- Interior Hung
- Needle Beam

Special use scaffolds and assemblies are capable of supporting their own weight and at least 4 times the maximum intended load. The types of special use scaffolds include:

- Form and Carpenter Bracket
- Roof Bracket
- Outrigger
- Pump Jack
- Ladder Jack
- Window Jack
- Horse
- Crawling Boards
- Step, Platforms, and Trestle Ladder

42.5.3 Safety Requirements

The footing or anchorage for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks shall not be used to support scaffolds or planks.

No scaffold shall be erected, moved, dismantled, or altered except under the supervision of competent persons or as requested for corrective reasons.

Guardrails and toe boards shall be installed on all open sides and ends of platforms more than 10 feet above the ground or floor, except needle beam scaffolds and floats. Scaffolds 4 feet to 10 feet in height having a minimum horizontal dimension in either direction of less than 45 inches shall have standard guardrails installed on all open sides and ends of the platform.

Guardrails must be 2 X 4 inches, or the equivalent, not less than 36 inches or more than approximately 42 inches high, with a mid-rail, when required, of 1 X 4 inch lumber, or the equivalent. Supports must be at intervals not to exceed 8 feet. Toe board and the guardrail shall extend along the entire opening. • Scaffolds and their components must be capable of supporting without failure at least 4 times the maximum intended load.

Any scaffold, including accessories such as braces, brackets, trusses, screw legs, ladders, couplers, etc., damaged or weakened from any cause must be repaired or replaced immediately, and shall not be used until repairs have been completed.

All load-carrying timber members of scaffold framing shall be a minimum of 1,500 fiber (Stress Grade) construction grade lumber.

All planking must be Scaffold Grades, or equivalent, as recognized by approved grading rules for the species of wood used. The maximum permissible span for 2 X 9 inch or wider planks is shown in the following:

- The maximum permissible span for 1-1/4 X 9 inches or wider plank of full thickness shall be 4 feet with medium duty loading of 50 p.s.i.

All planking or platforms must be overlapped (minimum 12 inches) or secured from movement.

An access ladder or equivalent safe access must be provided.

Scaffold plank must extend over their end supports not less than 6 inches or more than 18 inches.

The poles, legs, or uprights of scaffolds must be plumb and securely and rigidly braced to prevent swaying and displacement.

Overhead protection must be provided for men on a scaffold exposed to overhead hazards.

Slippery conditions on scaffolds shall be eliminated immediately after they occur.

No welding, burning, riveting, or open flame work shall be performed on any staging suspended by means or fiber of synthetic rope. Only treated or protected fiber or synthetic ropes shall be used for or near any work involving the use of corrosive substances or chemicals.

Wire, synthetic, or fiber rope used for scaffold suspension shall be capable of supporting at least 6 times the intended load.

Scaffolds shall be provided with a screen between the toe board and guardrail, extending along the entire opening, consisting of No. 18 gauge U.S. Standard wire one-half inch mesh or the equivalent, when personnel are required to work or pass underneath the scaffolds.

A safe distance from energized power lines shall be maintained.

Tag lines shall be used to hoist materials to prevent contact.

Suspension ropes shall be protected from contact with heat sources (welding, cutting, etc.) and from acids or other corrosive substances.

Scaffolds shall not be used during high wind and storms.

Ladders and other devices shall not be used to increase working heights on scaffold platforms.

Scaffolds shall not be moved while employees are on them.

Loose materials, debris, and/or tools shall not be accumulated to cause a hazard.

Employees working on suspended scaffolds shall employ a fall-arrest system.

Scaffold components shall not be mixed or forced to fit which may reduce design strength.

Scaffolds and components shall be inspected at the erection location. Scaffolds shall be inspected before each work shift, after changing weather conditions, or after prolonged work interruptions.

Casters and wheel stems shall be pinned or otherwise secured in scaffold legs. Casters and wheels must be positively locked if in a stationary position.

Tube and coupler scaffolds shall be tied to and securely braced against the building at intervals not to exceed 30 feet horizontally and 26 feet vertically.

42.5.4 Safe Scaffold Erection and Use

Safe scaffold erection and use is important in minimizing and controlling the hazards associated with their use. Scaffold work practices and rules should be based on:

- Sound design
- Selecting the right scaffold for the job
- Assigning personnel
- Fall protection
- Guidelines for proper erection
- Guidelines for use, alteration, and dismantling
- Inspections
- Maintenance and storage

42.5.5 Scaffold Tagging and Inspection

Inspection and tagging of the scaffold is to be performed by a competent worker experienced in the erection of scaffold.

A unique scaffold identification tag number must be clearly identified on all tags for tracking purposes.

All scaffolds shall be inspected after the erection as per the Occupational Health and Safety Act requirements.

All scaffold identification tags will be of a solid green, yellow, or red color with black lettering.

All scaffold identification tags will have the front information displayed and must be completed for each tag to include the following:

- Date Erected / Tagged
- Inspected By: Name (print & signature)
- Inspection Date
- Department or Group Responsible for Erection/Maintaining/Dismantling on the reverse.

It is common practice to use the following color schemes:

Green – tags will be hung on scaffolds that have been inspected and are safe for use. A green "SAFE FOR USE" tag(s), and should be attached to the scaffold at each access point after the initial inspection is complete.

Yellow – "CAUTION" tag(s), will replace all green "Safe Scaffold" tag(s) whenever the scaffold has been modified to meet work requirements, and as a result could present a hazard to the user. This tag indicates special requirements for safe use. The tag as a minimum requirement will have:

- The unusual or potential hazard marked on the reverse
- The preventative measures that must be taken prior to use to mitigate the hazard marked on the reverse
- The name of the Owner Client representative authorizing the use of the Yellow tagged scaffold.

The yellow tag should not to be removed until the scaffold has been returned to a safe condition and an inspection by a "competent person" has been completed. Based on the results of that inspection the appropriate tag (red or green) will be hung on the scaffold and the yellow tag removed.

NOTE: Use of the "yellow tag" status is not intended to override the green tag system. All efforts should be made to return the scaffold to a "Green Tag" status as soon as possible.

Red – "DANGER – UNSAFE FOR USE" tag(s), will be used during erection or dismantling when the scaffold is left unattended and replace all green "Safe for Use" tag(s) or yellow "Caution / Hazard" tag(s) in the event a scaffold has been deemed unfit for use. The tag(s) as a minimum requirement will include:

- The work order number or project number, the inspection date, and the name of the person who performed the inspection filled in on the front of the card
- The designation, under erection, being dismantled, repairs required, or overhead protection only, marked on the reverse
- Scaffold re-inspections must be completed any time when conditions may have changed causing the integrity of the scaffold to be suspect.

42.6 Training

Affected ALPHA employees will receive instruction on the particular types of scaffolds which they are to use. Training should focus on proper erection, handling, use, inspection, and care of the scaffolds. Training must also include the installation of fall protection, guardrails, and the proper use and care of fall arrest equipment. This training should be done upon initial job assignment. Retraining shall be done when job conditions change. Periodic refresher training shall be done at the discretion of the supervisor.

If an ALPHA designated "competent person(s)" is selected, he/she will receive additional training regarding the selection of scaffolds, recognition of site conditions, recognition of

scaffold hazards, protection of exposed personnel and others, repair and replacement options, and requirements of standards.

42.7 Record Retention

Documentation of Rigging – Offshore training shall be kept on file.

43. WATER SURVIVAL & OFFSHORE ORIENTATION

43.1 Purpose

The purpose of this program is to establish requirements for proper conduct of all ALPHA employees when working over or on the water (offshore environment) and survival in the event of an emergency.

43.2 References

OSHA 29 CFR §1910.183 – Helicopters

43.3 Definitions

Vessel – A ship or semi-submersible platform.

43.4 Responsibilities

43.4.1 Management

The President (or designee) shall determine which employees are required to receive Offshore Orientation and Survival Training.

The President (or designee) shall select an appropriate training facility to provide the training outlined in this program and shall monitor the selected training facility to assure they are conducting the proper training.

Management shall participate in all training exercises to prepare for emergency situations.

Company Representatives shall coordinate work schedules to allow employees time to receive proper training.

Company Representatives shall verify that each of his/her employees have the proper training before those employees start any work related tasks.

43.4.2 Employees

Employees shall assist his/her Company Representative in tracking required training.

The employee shall monitor all expiration dates pertaining to his/her required training and notify Company Representative in advance of any nearing expiration dates.

Employees shall participate in all training exercises to prepare for emergency situations.

43.5 Process

Employee shall report to the shore base/heliport properly dressed. No short pants or open toe shoes are allowed during transportation. Employee shall report to the shore base/heliport with all required personal protective equipment (PPE). In addition, no firearms, illegal drugs, and/or alcoholic beverages are allowed to be taken offshore by an ALPHA employee.

43.5.1 Heliport/Air Transportation

Employees shall:

- Report to the heliport in a timely manner
- Park in the designated area
- Report to the facility's dispatcher
- Sign the manifest with name, body weight, cargo weight, and destination
- Once name is called, follow the dispatcher's direction and report to the correct helicopter
- Remember the pilot of the helicopter is in command
- Approach the helicopter after the pilot has given you instructions to do so:
 - Never approach the helicopter from the rear and always be aware of the main and tail rotors
 - Never go under the tail section of the aircraft to get to the opposite side – always go around the front of the aircraft to get to the opposite side
- Place all cargo in the cargo compartments of the aircraft

Additional reminders:

- All helicopter flights over water require the use of a PFD – Prior to entering the helicopter, appropriately don the PFD that is supplied in the aircraft
- Due to center of gravity and weight distribution, the pilot may assign you to a particular seat
- Once in the aircraft, sit in the assigned seat, fasten the seat belts and apply hearing protection

- No horseplay is allowed during helicopter operations
- No smoking in the helicopter or the helicopter landing zones
- Prior to take off, the pilot will brief the passengers of the safe operations of that aircraft and the location of safety equipment (first aid kits, life rafts and floatation devices on the helicopter's landing skids) for that particular aircraft
- When disembarking the helicopter, exit the helicopter before doffing the PFD
- Pay close attention to rotating blades while unloading cargo and leaving landing zone
- Signal pilot when you have cleared possessions from landing zone and he/she is cleared for takeoff
- Once on the facility, the employee(s) is/are to report to the dispatcher/company representative for a site-specific orientation

43.5.2 Shore Base/Marine Transportation

Employees shall:

- Report to the shore base in a timely manner
- Park in the designated area
- Report to the facility's dispatcher
- Sign the manifest with name, body weight, cargo weight, and destination
- Once name is called, follow the dispatcher's direction and report to the correct boat
- Remember the captain of the vessel is in command
- To board the vessel, you shall don their personal PFD, use the personnel ramp and follow the instructions of the vessel's crew

Additional Reminders:

- The vessel's crewmembers shall brief passengers of where to place cargo, location of additional PFD's, fire extinguishers, restrooms, smoking areas, radios, eating areas, and living quarters
- If the employee elects to sleep during the boat ride, remove shoes prior to lying across the seats
- Disembarking - there are two (2) methods to disembark the marine vessel and both methods require the employee to don their PFD:
 - The first, and most desired method, is with the use of a personnel basket: The employee places his/her feet on the bottom ring (knees slightly bent for shock absorbing) and hangs onto the basket's netting while being lifted

- The second choice of disembarking the vessel is with the use of swing ropes: The employee is required to swing from the rear of the vessel to the platform with the use of a hanging rope
- Heavy tools and equipment shall be placed in a cargo basket in order to be removed from the vessel
- Once on the facility, the employee(s) shall report to the facility's dispatcher/company representative for a site-specific orientation

43.5.3 Site Specific Inland/Offshore Orientations

Employees shall:

- Once on location and prior to commencing any work, the employee(s) shall ask for a site-specific orientation
 - During this orientation, the employee will gain knowledge on the following:
 - Sign in Book – will supply a method to track Persons on Board (POB)
 - The whereabouts of the “Station Bills”, what the employee will be responsible for in case of an emergency and where to report in case of an emergency (Note: The “Station Bill” will provide escape routes and methods of disembarking/abandoning the facility)
 - Location of PFD's inside the living quarters, PFD's outside the living quarters and the location of life rafts/survival crafts
 - Living arrangements (assigned bunk, restrooms, galley and recreation room)
 - How to distinguish between production alarms and emergency alarms
 - The location of Emergency Shut Down (ESD) devices, firefighting equipment, and first aid equipment
 - Posted areas that exceed 85 dBA where hearing protection is required
 - Designated smoking areas
 - Client's reporting procedures for any and all incidents – no matter how minor

43.6 Training & Record Retention

Training records shall be kept and maintained. All employees shall have documentation of their training in their possession at all times when working at an Owner Client location.

Training shall include:

- Marine Trash and Debris Awareness
 - The course will be completed on an annual basis

- Water Survival course:
 - The course will be taken at approved training facilities that are selected by local management and are required to recertify per Owner Client /project requirements

44. Welding, Cutting, & Hot Work

44.1 Purpose

The purpose of this Procedure is to explain the general safety practices and/or procedures for welding, cutting, or brazing operations.

44.2 References

OSHA 29 CFR §1910.251-255 – Welding, Cutting, and Brazing

OSHA 29 CFR §1915 Subpart D – Welding, Cutting, and Heating

44.3 Definitions

Exhaust Hood – A local ventilation system that extracts gases and fumes from a specific work area.

Flammables – Any material that can be ignited by sparks or flames from welding and cutting work.

Flashback Arrestor – A device designed to prevent gases from backing up and mixing in the supply system, and reduces the likelihood of a flame traveling back into the supply system.

Friction Lighter – A hand-operated device that produces sparks for igniting fuel-gas.

Fuel-gas – Gases that are used to produce heat for welding, cutting and brazing (e.g. Acetylene and Propane).

Ground Fault Circuit Interrupter (GFCI) – A device that monitors the electricity flow in a circuit and immediately shuts off the current flow if a slight difference in the amount of current flowing in and returning is detected.

Shielding Gas – An inert gas used in some types of arc welding.

44.4 Process and/or Procedure

44.4.1 Safety Equipment

Everyone in the welding or cutting area must wear the correct personal protective equipment (PPE). Always inspect your personal protective equipment prior to beginning work. Helmet, gloves, and clothing should be dry, in good repair and must cover exposed parts of your body.

44.4.1.1 PPE for Arc Welding

Approved helmet – Leather Gloves up to the elbow – Hood with filter lens or plate

44.4.1.1 PPE for Fuel-Gas Torch

Leather Gloves up to the elbow – Approved dark goggles that seal around the eyes

44.4.1.1 PPE for Observing Welding Operation(s)

Welding goggles or a shaded shield

Note: Shaded safety glasses are not acceptable for welding or cutting

44.4.2 Ventilation

Welding or cutting may sometimes produce toxic materials depending on the types of metals or paints involved. The worksite must be adequately ventilated when welding or cutting produces significant amounts of toxic materials. If adequate ventilation cannot be provided, all employees involved, including any employee stationed as a safety guard, must wear suitable respirators that are approved for use with welding fumes.

Types of compounds that can produce toxic materials include:

- Fluorine
- Zinc
- Lead
- Beryllium
- Cadmium
- Mercury

44.4.3 Fire Protection

An inspection of the work site will be conducted prior to performing work. The purpose of the inspection is to identify precautions needed. This may be documented through the use of a Hot Work Permit or JSA.

44.4.3.1 Flammables

Always take suitable precautions to prevent heat, sparks and slag from coming into contact with flammables. Where possible, the object to be cut or welded should be kept apart from flammables. This can be achieved by either moving the object to a safe location or removing all flammables from the worksite. If this is not possible, then guards must be used to confine the heat, sparks, and slag in order to prevent contact with the flammables.

When/if welding in an area where gas or other airborne contaminants might ignite from an explosive atmosphere – use a gas detector or sniffer to test for explosive gases. Do not begin work unless it has been determined that it is safe to do so.

If the requirements stated in this section cannot be met, welding or cutting will not be performed.

44.4.3.2 Fire Extinguishers

Always have a fire extinguisher within reach when welding. If a fire extinguisher is not available, a water hose located in or near the area is acceptable.

44.4.3.3 Fire Watcher

A trained fire watcher in the use of fire extinguishers must be required whenever welding or cutting is performed in locations where other than a minor fire might develop, or any of the following conditions exist:

- Flammables, in building construction or contents, closer than 35 feet (10.7 m) to the point of operation
- Flammables are more than 35 feet (10.7 m) away but are easily ignited by sparks
- Wall or floor openings within a 35-foot (10.7 m) radius expose flammables in adjacent areas including concealed spaces in walls or floors
- Combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings, or roofs and are likely to be ignited by conduction or radiation
- When welding in a confined space

The fire watcher must watch for fires in all exposed areas, try to extinguish them only when obviously within the capacity of the equipment available and training, or otherwise sound the alarm. A fire watch must be maintained for at least a half hour after completion of welding or cutting operations to detect and extinguish possible smoldering fires.

44.5 Working in Confined Spaces

Work of this nature requires several additional safeguards that include:

- The workspace must be adequately ventilated by use of fans or exhaust hoods to prevent the accumulation of toxic materials. If this is not possible, all employees working in the confined space and any employees stationed outside as safety guard must wear suitable respirators.
- All gas cylinders and welding machines will be left outside the confined space.
- Where an employee must enter a confined space through a small opening, means must be provided for quickly removing him in case of emergency. When safety belts and lifelines are used for this purpose they must be so attached to the employee's body that his body cannot be jammed if an attempt is made to pull it quickly out of the small opening. A separate employee with a pre-planned rescue procedure will be stationed outside the confined space.
- When arc welding or cutting is to be suspended for any substantial period of time, such as breaks or overnight, the welding equipment must be disconnected from the power source and all electrodes removed from holders. Electrode holders will also be secured so that accidental contact cannot occur. Where possible, the electrode holder and cables will be removed from the confined space.
- When gas welding or cutting is to be suspended for any substantial period of time, such as breaks or overnight, the torch valves will be turned off and the gas supply to the torch shut off outside the confined space. Where possible, the torch and hoses will be removed from the confined space.
- After welding or cutting operations are complete, warning signs will be posted warning of any hot metal that remains at the worksite.

44.6 Arc Welding and Cutting

44.6.1 Inspection of Equipment

In addition to the PPE checks listed in section 43.5.1, the following will be checked prior to any arc welding or cutting work being carried out:

- Inspect welding cables and electrode holders for damage or wear
- If the welding cable is coiled, spread it flat to avoid overheating
- Check that all electrical and shielding gas connections are correct and secure
- Make sure that grounding conductor is mechanically strong and electrically adequate for the required current
- Check for leaks of cooling water, shielding gas or engine fuel, if applicable

44.6.2 Electric Shock

Although voltages used on standard arc welding equipment are relatively low, they should be considered a potential hazard. Precautions against electric shock include:

- Make sure that no cables splices are within ten feet of the electrode holder
- Make sure that clothing and hands are dry
- Do not coil or loop welding electrode cable around parts of the body
- Cables will only be joined together by the use of connecting devices specifically intended for the purpose
- Never change electrodes with bare hands or wet gloves
- Make sure that the frames of welding machines are grounded

44.6.3 General Procedures

Obtain a hot work permit for work performed in restricted areas. Protect cables from damage caused by sharp objects, welding sparks, being run over, or from contacting water. Make sure that sparks from welding or cutting cannot come into contact with nearby electric cords or hoses. Repairs to equipment will only be carried out by qualified personnel. Do not begin work if any of the defects listed in this section are discovered.

44.7 Oxygen-Fuel Welding and Cutting

44.7.1 Care of Gas Cylinders

General guidelines for safe storage and transport of cylinders include:

- Will have labels that clearly identify the contents
- All cylinders will be stored in well-protected, well-ventilated, dry locations, at least 20 (6.1 m) feet from highly combustible materials and petroleum products
- Oxygen cylinders in storage must be separated from fuel-gas cylinders or combustible materials (especially oil or grease), a minimum distance of 20 feet (6.1 m) or by a noncombustible barrier at least 5 feet (1.5 m) high
- Will be stored in an upright position
- Where possible, will have valve caps fitted while in storage or transit
- Cylinder valves must be closed before moving cylinders
- Cylinders must be handled carefully – Rough handling, knocks, or falls are liable to damage the cylinder, valve or safety devices and cause leakage
- If cylinders are found to have leaky valves or fittings that cannot be stopped by closing of the valve, the cylinders must be taken outdoors away from sources of ignition and slowly emptied

44.7.2 Use of Gas Cylinders

The following steps must be performed when preparing both the oxygen and fuel-gas cylinders for use:

- Never open a valve near welding work, sparks, or flammable materials
- Before connecting a regulator to a cylinder valve, the valve must be opened slightly and closed immediately
 - This operation will clear any particles of dust or dirt from the valve
 - The valve must be opened while standing to one side of the outlet; never in front of it
 - A hammer or wrench must not be used to open cylinder valves
 - If valves cannot be opened by hand, the supplier must be notified
- Only attach approved regulators and gauges to the cylinders
- Reduce the regulator pressure to its minimum setting by turning the adjusting screw counterclockwise
- Slowly and carefully open the cylinder valve until the cylinder contents pressure gauge shows maximum pressure
 - Never stand directly in front of or behind a regulator when opening the cylinder valve
- Adjust the regulator pressure as required

The following steps must be performed when removing an oxygen or fuel-gas cylinders from service:

- Close the cylinder valve
- Open the torch valves and allow any residual pressure to bleed off
- Reduce the regulator pressure to its minimum setting by turning the adjusting screw counterclockwise
- Close torch valves and remove regulator
- Where possible, fit a valve cap to the cylinder

44.7.3 Inspection of Equipment

In addition to the PPE checks, the following will be checked prior to any cutting or brazing work being carried out:

- Inspect pipes, hoses, and fittings; for cuts, nicks, burns or any other damage that could cause a leak – Do not use hoses that are damaged or leaking
- Inspect regulator and gauges for damage
- Inspect torch for damage or wear – Never use a leaky torch
- Secure fuel or gas and oxygen cylinders with the valve end up

Also, if you suspect a problem such as a leak (symptoms of leaks include; cylinders don't last as long as normal, hissing noises and an acetylene smell) the following additional checks will be made:

- Use a soap solution to check for leaks
 - Squeeze one drop at a time on the hose, regulator valve and/or cylinder valve
 - If bubbles appear on the equipment, then it is leaking
- Immerse hoses in water and check for bubbles appearing

Any equipment that is found to be defective will be immediately removed from service and repaired or replaced

44.7.4 General Procedures

Obtain a hot work permit for work performed in restricted areas.

Cylinders, cylinder valves, couplings, regulators, hose, and apparatus must be kept free from oily or greasy substances.

Do not over tighten connections. Use only enough force as is necessary to produce a gas-tight seal.

Cylinders must be kept far enough away from the actual welding or cutting operation so that sparks, hot slag, or flame will not reach them, or fire-resistant shields must be provided.

Use a friction lighter or other approved device to light the torch. Don't use a match or a cigarette lighter.

Do not point the torch at other people. Keep the torch away from combustible or flammable materials.

When you have finished welding, cutting or brazing operations, carry out the following routine:

- Close the valves of the acetylene and oxygen cylinders
- Open the torch valves to relieve pressure from hoses and regulators
- Close the torch valves again and release the regulator pressure adjusting screws
- Check the area for smoldering fires and extinguish them, roll up the cables, and clean the area
- Do not begin work if any of the defects listed in this section are discovered

44.8 Training

All ALPHA employees and supervisors who are involved in the operation of welding, cutting and brazing equipment will be trained on the principles and procedures contained in this document.

Only people who are trained and authorized by ALPHA will operate, or supervise operations of, welding, cutting and brazing equipment.

44.9 Record Retention

Training records will document signatures of those trained, dates of training, signatures of people providing training and syllabus or outline of course content. At a minimum, records of all training shall be kept on file.